

**Tillbridge Solar Project
EN010142**

**Written Summary of Applicant's Oral Submissions
at the Issue Specific Hearing 3 (ISH3)**

EN010142/APP/9.34

Infrastructure Planning (Examination Procedure) Rules 2010

**January 2025
Revision Number: 00**

tillbridgesolar.com

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

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9.34 Written Summary of Applicant's Oral Submissions at the Issue Specific Hearing 3 (ISH3) on 15 January 2025

Planning Inspectorate Scheme Reference	EN010142
Application Document Reference	EN010142/APP/9.34
Author	Tillbridge Solar Project Team

Version	Date	Status of Version
00	28 January 2025	Deadline 4 submission

1.0 INTRODUCTION

- 1.1 This note summarises the oral submissions made by Tillbridge Solar Limited (the "**Applicant**") at Issue Specific Hearing 3 ("**ISH3**") held on 15 January 2025 in relation to the application for development consent ("**Application**") for the Tillbridge Solar Project (the "**Scheme**").
- 1.2 Where the Examining Authority (the "**ExA**") requested additional information from the Applicant on specified matters, or the Applicant undertook to provide additional information during the course of ISH3, that information is either set out in this document or provided as part of the Applicant's Deadline 4 submissions.
- 1.3 This note does not purport to summarise the oral submissions of other parties, and summaries of submissions made by other parties are only included where necessary to give context to the Applicant's submissions, or where the Applicant agreed with the submission(s) made and so made no further submissions (this is noted within the document where relevant).
- 1.4 The structure of this note follows the order of the items listed in the detailed agenda published by the ExA on 6 December 2024 (the "**Agenda**"). Numbered agenda items referred to are references to the numbered items in the Agenda. The Applicant's substantive oral submissions commenced at Item 3 of the Agenda. Therefore, this note does not address Items 1 and 2 on the Agenda as these were procedural and administrative in nature.

2.0 WRITTEN SUMMARY OF THE APPLICANT'S ORAL SUBMISSIONS

Agenda Item	Applicant's Response
3a – Health, Safety and Wellbeing	
<p>The effects of the Proposed Development on human health – including the long term wellbeing of the adjacent communities and the risk presented by incidents related to battery energy systems storage and working adjacent to other major hazards.</p>	<p>Mental Health</p> <p>The ExA outlined that the Applicant has assessed the mental health impacts of the Proposed Development by first assessing specific impacts which could impact mental health (such as traffic, noise, or restrictions on use of resources like public rights of way), and then concluding based on the assessment of these effects whether any impacts to mental health are likely to arise from them. The ExA noted that this has led the Applicant to conclude there are no significant adverse impacts with regards to human health, given the Scheme mitigates the impacts in relation to issues which may generate adverse effects on mental health. The ExA asked the Applicant to briefly summarise the approach to assessing mental health impacts.</p> <p>Ms Alexis Coleman, on behalf of the Applicant, advised that the relevant expert for this topic was unable to attend the hearing and speak to these matters due to urgent personal circumstances, noting the Applicant would instead respond to any matters raised in writing</p> <p>The ExA accepted this and requested the Interested Parties and Statutory Undertakers views on the approach adopted by the Applicant to assessing mental health impacts in respect of its effectiveness and rigour. The ExA noted that 7000 Acres has suggested a further study is necessary and the ExA asked 7000 Acres for their views on what the form and detail of that further study should look like. Mr Ray Stanfield, on behalf of 7000 Acres, stated that it was necessary to consider this topic in further depth and that he would liaise with Dr Proctor and Dr Parkin and respond to the ExA in writing.</p> <p><i>Post hearing note: In response to matters raised during the Hearing, the Applicant has prepared the following overview of the approach taken to the assessment of health and wellbeing impacts for the Scheme.</i></p> <p><i>The assessment set out at Chapter 11: Human Health of the ES [APP-042] is centred around a holistic approach to health, defining it in line with that used by World Health Organisation (WHO) Europe, as a “state of complete physical, mental and social wellbeing not merely the absence of disease or infirmity”. The IEMA guidance (Ref. 1-1) referred to in the chapter, and the Wales Health Impact Support Unit (WHIASU): Health Impact Assessment: A Practical Guide (Ref. 1-2), both use this definition with these sources comprising the recognised methods and guidance currently in use for EIA and DCO development. Drawing on this definition, as well as considering impacts on physical health, impacts and outcomes in respect of mental wellbeing, quality of life and amenity are all taken into account and assessed. Some impacts considered in the assessment have more direct relevance to mental health and wellbeing, in the context of the Scheme, such as changes in landscape and visual amenity, changes in noise, access to open space and access to employment opportunities. However, it is the Applicant’s position that all impacts considered in the assessment in Chapter 11: Human Health of the ES [APP-042] have direct or indirect relevance to mental health and wellbeing, given the holistic approach followed that aligns with the definition above. To support this, a summary of the potential positive and negative impacts that have been considered and how these relate to health outcomes within this definition is set out in the table below. Mitigation measures proposed by individual topic assessments which are of relevance to each determinant are also included.</i></p>

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	Determinant of health	Elements of assessment	Topic Specific Mitigation
Effects on healthcare services/infrastructure	<ul style="list-style-type: none"> • Pressure on GP services • Traffic severance impacts 	Transport mitigation, including the Framework CTMP [EN010142/APP/7.11(Rev04)]	
Effects on other social infrastructure, including schools and community facilities	<ul style="list-style-type: none"> • Increased user demand • Traffic severance effects 	Transport mitigation, including the Framework CTMP [EN010142/APP/7.11(Rev04)]	
Prioritisation of walking and cycling (access to open space and active travel)	<ul style="list-style-type: none"> • PROW effects • Traffic (inc non-motorised amenity, severance, safety, fear & intimidation) 	Transport mitigation, including the Framework CTMP [EN010142/APP/7.11(Rev04)] , and Framework PProW Management Plan [REP3-041] .	
Road and route safety	<ul style="list-style-type: none"> • Increases in traffic on the local road network • Road safety and health impacts 	Transport mitigation, including the Framework CTMP [REP3-039] , and Framework PProW Management Plan [REP3-041] .	
Noise and vibration	<ul style="list-style-type: none"> • Human health and wellbeing impacts from noise and vibration (refer to Chapter 13: Noise and Vibration of the ES [AS-006]). 	Framework CEMP [REP3-033] , Framework OEMP [EN010142/APP/7.9(Rev03)] , Framework DEMP [REP3-037] (e.g. Working hours, community liaison), and Framework CTMP [EN010142/APP/7.11(Rev04)] (e.g. Construction traffic management).	
Air quality	<ul style="list-style-type: none"> • Human health and wellbeing impacts from dust soiling, construction traffic, and NO₂ pollutants (refer to Chapter 6: Air Quality of the ES [APP-037]). 	See Chapter 6: Air Quality of the ES [APP-037].	
Access to employment and income opportunities	<ul style="list-style-type: none"> • Job creation (refer to Chapter 14: Socio-economic and Land Use of the ES [APP-045]) 	Framework Skills, Supply Chain and Employment Plan (FSSCEP) [APP-232] .	
Climate change (ghg emissions)	<ul style="list-style-type: none"> • Human health and wellbeing impacts from GHG emissions (refer to Chapter 7: Climate Change of the ES [APP-038]). 	See Chapter 7: Climate Change of the ES [APP-038].	
Landscape and visual amenity	<ul style="list-style-type: none"> • Human health and wellbeing impacts from changes to views, landscape, and neighbourhood amenity (refer to Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev02)]). 	See Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev02)].	

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	<p><i>This approach to the assessment of human health impacts was identified and scoped in the Scoping Report [APP-051], which was also the subject of consultation with the relevant statutory bodies and confirmed (having regard to consultee responses) in the Scoping Opinion [APP-052]. This confirmed scoped approach is in conformity with the NHS England HUDU Rapid HIA Toolkit (2019) (Ref. 1-3), IEMA guidance and Wales Health Impact Support Unit (WHIASU) guidance (Ref. 1-2). The overall process followed in the assessment of effects on human health and wellbeing in Chapter 11: Human Health of the ES [APP-042] is equivalent in detail and rigour to that undertaken for the assessment of all other effects within the ES. This is on the basis of it having been through a scoping process, relevant guidance followed, with potential impacts identified and statutory consultation on findings has been undertaken.</i></p> <p><i>A number of consented energy DCOs have undertaken an assessment of effects on human health using a similar methodology to that adopted by the Applicant based on the HUDU approach, which IEMA guidance has been developed from. Some examples of this include the Longfield Solar Farm [EN010118], East Anglia ONE North Offshore Wind Farm [EN010077] and the nearby Gate Burton Energy Park [EN010131]. In respect of endorsement of this approach, the Applicant notes that the ExA in the Recommendation Report for the Gate Burton Energy Park [EN010131] confirmed at paragraph 3.7.49 that: "I am [therefore] satisfied that the assessment undertaken does address the likely significant effects that would arise in relation to human health and wellbeing". The Gate Burton project is within the same local authority areas and the assessments have therefore been sensitive to similar policy and baseline conditions in scoping and undertaking their respective assessments.</i></p> <p><i>The approach to the assessment also aligns as far as practicable with relevant local authorities' guidance on undertaking health impact assessment for planning applications. Central Lincolnshire's "Health impact assessment for planning applications - Guidance Note" (Ref. 1-4) guides developers and decision makers on the implementation of policy S54 Health and Wellbeing in the Central Lincolnshire Local Plan (Ref. 1-5). It sets out that there is no set methodology for undertaking HIA, but chooses to reference the NHS HUDU Tool, which has informed the more recent IEMA guidance and the assessment, as a useful resource. Nottinghamshire County Council's (NCC) Spatial Planning and Health Framework (Ref. 1-6), provides a checklist (Appendix 2) designed to systematically and objectively evaluate the potential impacts, both positive and negative, of planning applications on health and wellbeing, which is applicable in Bassetlaw. As confirmed in Paragraph 6.8 of the framework, this checklist aligns closely with the NHS HUDU Tool (Ref. 1-3) (which informed the IEMA guidance). As all this guidance is for developers and outlines a specific approach to follow in assessing health impacts on development applications, it provides additional confirmation and justification that the approach taken in the assessment is appropriate and proportionate given the alignment between them.</i></p> <p><i>Reference has also been had to relevant Health and Wellbeing strategies prepared by NCC (Ref. 1-7) and Lincolnshire County Council (Ref. 1-8) to set the assessment approach in the appropriate context as far as practicable.</i></p> <p><i>Overall the approach to the assessment of effects relating to mental health is considered to be soundly based through; the definition of health considered, itself reference and scope within the terms of best practice guidance; the following of such guidance in scoping and completing the assessment, including aligning with relevant local authority guidance; the existence of precedent for assessing health impacts on comparable energy NSIPs completed recently including locally in Lincolnshire; and corroboration of the proportionality of the assessment by local guidance on assessing health impacts arising from new development.</i></p> <p>Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev01)] and Appendix 12-6: LVIA assessment of</p>

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	<p>Visual Effects of the ES [REP3-008] indicates that likely significant adverse effects on views of the construction works and site in operation could be experienced by recreational users of PRowS and roads (pedestrians) at some viewpoints. The assessment methodology for health and wellbeing, aligning with the IEMA guidance referenced above (Ref. 1-1), sets out to consider effects at the community level and as such overall conclusions with respect to impact magnitude, sensitivity of receptors, and effect significance accordingly has been reached in the assessment in Chapter 11: Human Health of the ES [APP-042]. Taking into consideration the conclusions of the LVIA, the mitigation measures proposed and that the overall number of residents affected in the community would likely be low, the impact was assessed as being of a low magnitude overall. It was recognised in the chapter that visual effects can impact health, including mental health and wellbeing and the community was assigned medium sensitivity to such impacts. This is not withstanding that for some residents who may be affected the effect experienced may be more noticeable and impact them more than it may for others, it not being noticeable to those who do not use such routes for recreational purposes.</p> <p>The Applicant recognises that the potential for future environmental changes associated with the Scheme during construction, operation and decommissioning is currently a source of concern for some local residents. The Applicant intends to support and utilise the Community Liaison Group to minimise impacts that may arise from potential stress associated with the delivery of the Scheme. Furthermore, the Applicant is considering the structure and set up of the Community Benefit Fund, so that greater focus on health and wellbeing benefits and outcomes could be provided, and will provide additional detail on the implementation of the fund at Deadline 5. The intention is that this package will be delivered in cooperation with the Lincolnshire and Nottinghamshire community foundations.</p> <p>Localised Temperature Increase The ExA asked the Applicant if the change of use from a large area of grassland to a large area of solar panels would result in an increase in a localised temperature increase that would impact local residents.</p> <p>Ms Coleman, directed the ExA to the Applicant's Responses to Relevant Representations [REP1-028] at page 291 in which the Applicant has detailed that there are currently conflicting bodies of research on this point. However, to the extent that there is any increase in temperature (if any at all) as a result of the installation of the solar panels, Ms Coleman stated that this was not expected to be noticeable and therefore would not result in consequential effects in terms of health.</p> <p>Post-hearing note: There is currently no consensus amongst the scientific literature regarding the effect of solar panels on the localised climate. Published studies by Barron-Gafford, G., Minor, R., Allen, N. et al. (The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures, DOI: [REDACTED]) show a noticeable increase in local temperatures, with the centre of a large solar farm being up to 4°C higher than ambient conditions. However, an analysis from Fthenakis & Yu (Ref. 1-9) has suggested that this heating effect is very localised, reducing to under 0.5 °C with 5 m of elevation and 300 m of horizontal distance.</p> <p>Further to this, research by Masson et al. (Ref. 1-10) suggests that solar farm installations are effective in reducing both global and local temperatures, with evidence of a localised temperature decrease related to the solar installation.</p> <p>As demonstrated by the above studies there is no unified agreement as to the localised climate consequences associated with the installation of large-scale solar farms. While it is possible there will be temperature increases at an extremely localised scale, this is not expected to have a wider significant effect.</p>

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	<p>Fire Safety</p> <p>The ExA returned to the topic of Fire Safety, further to the initial discussion had with interested parties, including the Lincolnshire Fire and Rescue Service at the Second Issue Specific Hearing.</p> <p>The ExA set out that their understanding of the data supplied by the Applicant indicates that there is a 0.3 chance of battery system failure per GW per year which equates to roughly nine failures of this system over the lifetime of the development. Further, the ExA noted a report provided by the Clean Energy Association which outlines that the thermal runaway of such fires means they are unlikely to be stopped once underway, and must instead burn out. The ExA asked for the Parties in the room to provide their view, focussing in particular on whether fire, smoke or toxic gases would impact the local community and whether the runoff resulting from fighting a fire would pollute local environments and waterways.</p> <p>Mr Paul Gregory, on behalf of the Applicant, outlined that these failure estimations did not reflect current BESS designs deployed in the UK and appropriate for comparison to the Tillbridge scheme. Due to operational and safety technical developments and the development of better safety mitigation procedures the number of BESS failure incidents dropped by 97% between 2018 and 2023. Further Mr Gregory detailed that as of July 2023, there were 92 BESS sites in operation across the UK with the total energy capability to deliver an estimated 1,580MW (1.58GW) of electricity to the grid. Since 2006 UK based BESS have operated for approximately 4.8 million hours (4,729,560 hours) which is equivalent to 548 operational years and in this time there has been only one major incident that has required assistance from the fire and rescue service; this was the BESS incident that occurred in Liverpool, Carnegie Rd in 2020. This equates to a likelihood of 2.11E-07 (0.00000211) failures per hour for BESS fires in the UK, which aligns with Health and Safety Executive (HSE) expectations and an acceptable level of risk as detailed in the HSE publication 'Reducing Risk Protecting People' (Ref. 1-11). Mr Gregory added that from his experience with the latest battery cell design and protection systems, including the improvement in controls and monitoring, data analytics, ability to spot safety issues before they occur and minimising the possibility of BESS incidents has significantly decreased. Mr Gregory gave an example of an ongoing project which had conducted a analysis showing a typical BESS system for have a cell failure venting event at approximately once every 3 million years per enclosure which equates to 1.3 x 10⁻⁴ (0.00013) per year for large scale BESS projects (schemes incorporating 200+ enclosures).</p> <p>The ExA acknowledged the improvement in safety driven by technology and asked Mr Gregory to explain thermal runaway and how it might be managed on site locally. Mr Gregory noted that he did not like to generalise in relation to real world incidents as there are a number of variables for each system and battery enclosures which dictate the level of risk for these. However, he noted that there has been a range of full-scale destruction testing to see what happens in terms of the fire impacts and toxic impacts. This full-scale destruction testing has shown that:</p> <ol style="list-style-type: none"> a) Peak fire load or Peak Heat Release Rate (PHRR) is the point at which most battery cells are in thermal runaway at the same time, producing the most significant flames during a failure incident. For typical current BESS designs with battery systems containing eight battery modules per rack and four to eight racks or bays per enclosure, this peak load (PHRR) would last roughly 1-2 hours (dependant on the state of charge, and layout within a container). The rest of the fire, typically lasts another 4-8 hours mainly involving combustible materials in the battery system and BESS enclosure (plastics, wiring, battery rack materials, control systems, etc.) burning at a lower intensity which reduces the impact of the fire.

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	<p>b) He noted large form prismatic LFP cells (depending on state of charge and vent design) during thermal runaway typically burn for 20-45 seconds. The gas produced during this burn would be approximately 200-400L per battery (dependant on the state of charge and other variables), and would largely be made up of carbon dioxide, nitrogen and carbon monoxide, with lower levels of hydrogen and hydrocarbons</p> <p>The ExA asked Mr Gregory to explain what the impacts on local residents would be from a fire.</p> <p>Mr Gregory, for the Applicant, confirmed that a BESS fire would include toxic emissions, including varying levels of hydrogen chloride, hydrogen fluoride, hydrogen cyanide, and carbon monoxide. DNV have found battery fires can be viewed as generally comparable to typical plastics fires.</p> <p>However, full scale burn testing and real world BESS incidents have shown that any smoke and chemicals diffuse quickly in the air in most weather conditions. Recent consequence modelling from full scale burn testing has demonstrated that toxic emissions have dissipated in close proximity to BESS enclosures to safe IDLH levels typically at 35-50 metres from the BESS Enclosure. While safety needs to be carefully considered and managed for firefighters and onsite staff, there would be no significant safety risk to local residents, given the design ensures they will be at minimum 250 metres from BESS sites). To be conservative, the Emergency Response Plan for the Scheme requires plume modelling of the final layout to ensure that emissions levels will be safe, as set out within the Framework Battery Safety Management Plan (BSMP) [APP-225]. Mr Gregory also noted that volumes of toxic gases and heavy metal particulates that can be emitted during thermal runaway are often partially contained within the BESS enclosure (modules, racks, interior structure of BESS enclosure) and not vented into the external environment.</p> <p>In respect of the height of the fire, a BESS Enclosure would typically be 2.5-3m high and flames would vent out of the top of the BESS (through deflagration vents or gas exhaust outlets) reaching about 4-5m height during the fire peak.</p> <p>The ExA asked whether any of the explanations provided by Mr Gregory in respect of how a BESS fire works (including how BESS enclosures are laid out) differs between a DC coupled system and an AC coupled system.</p> <p>Mr Gregory confirmed that BESS enclosure, battery system and all integrated equipment are exactly the same regardless of whether an AC coupled system or DC coupled system is used, the difference is that DC systems are typically made up of smaller clusters of BESS enclosures, whereas AC coupled systems typically have one large concentration of BESS enclosures together.</p> <p>Ms Sue Bingham raised a question about the likelihood of containing a BESS fire and avoiding spread to neighbouring crops or grassland. The ExA requested that Mr Gregory respond to the potential for external risks and for fire to spread amongst other elements.</p> <p>Mr Gregory noted that full scale free burn testing will demonstrate that fire propagation from BESS enclosure selected at the detailed design stage would not spread to adjacent BESS enclosures. Safety is also further enhanced by requirements in the Framework BSMP [APP-225] which outline that:</p> <ul style="list-style-type: none"> • vegetation will be controlled in and around the Principal Site; • BESS and ancillary equipment will be more than 10m from vegetation;

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	<ul style="list-style-type: none"> • any BESS Enclosure will be located at least 30m from the Order Limits in compliance with guidance, and this will be controlled by the installation of BESS fencing; • every BESS-Solar Station Compound will be provided with at least the minimum volume of firefighting water required per National Fire Chiefs Council (“NFCC”) guidance. These volumes are agreed and signed off by a fire protection engineer and this is currently an agreed minimum of 1,900 litres per minute for 2 hrs. <p>Ms Coleman added that these measure are secured by the Framework BSMP [APP-225] and Requirement 6(1)and (3) of the draft DCO [REP3-004] requires that the detail of the Framework BSMP [APP-225] is approved by the Local Planning Authority (Lincolnshire County Council and Nottinghamshire County Council) in consultation with West Lindsey District Council, Lincolnshire Fire and Rescue Service (“LFRS”), Nottinghamshire Fire and Rescue Service and the Environment Agency. The risk from fire propagation to people and property is further reduced by the 250 metre offset from properties secured in the Outline Design Principles Statement (“ODP”) [REP3-029] and by Requirement 5 of the draft DCO [REP3-004] which requires that the detailed design of the Scheme must comply with the ODP. Finally, the Applicant has also agreed protective provisions with LFRS in the draft DCO [REP3-004] to facilitate and fund LFRS to undertake an annual site familiarisation process which would further reduce the risk of fire propagation throughout the Principal Site.</p> <p>Ms Liz Garbutt, for 7000 Acres, and the ExA asked the Applicant if a fire incident occurred whether there would be an immediate monitoring and warning signal in place to warn residents, or if an external warning system would be relied upon (for example the local resilience forum or the LFRS)?</p> <p>Mr Gregory responded that the Applicant is required to prepare an Emergency Response Plan in conjunction with LFRS, which would include a Scheme-specific approach to communicate to neighbouring residents about incidents where necessary. Whether the operator warns the local community directly or whether they would be informed by the emergency services would depend on the detail of the site specific Emergency Response Plan, and be informed by the preference of the LFRS and local authorities. Mr Neil McBride on behalf of Lincolnshire County Council (“LCC”) added that the emergency services would have their own procedures for communicating with the local community following an incident and that he would not expect a local resilience forum to be involved.</p> <p>Mrs Carol Montgomery raised a battery fire incident in Bouldercombe, Queensland, Australia in September 2023 where a battery fire was left to burn out for more than 12 hours and expressed concern that if a similar a battery fire occurred on site that smoke and fumes would be blown by wind towards local communities. The ExA asked the Applicant to respond to Mrs Montgomery’s concern.</p> <p>Mr Gregory, for the Applicant, stated that the Bouldercombe fire was a Tesla Megapack BESS system which does not contain an internal suppression system but instead is designed to be fully consumed during fire by a “sparker system” which ignites vented battery gases minimising explosion risks. He noted the length of the burn was probably extended due to the Megapack operating at a low state of charge when the thermal event occurred, meaning most of the fire was the slower burn of the battery system combustibles and ancillary components within the Megapack system as opposed to just batteries burning for 12 hours. Mr Gregory noted that following the Bouldercombe incident no level of toxic emissions recorded outside the site. He also noted that community toxic emission monitoring was conducted for a separate Tesla Megapack incident in 2021 in Victoria, Australia, and showed no levels of toxic emissions for communities within 2km of the incident. Further, Mr Gregory stated that if a significant emission rate were to coincide with stronger winds, rather than blowing the smoke and fumes towards the local community, this would dissipate the emissions in a quicker timeframe at</p>

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	<p>reduced distances. He clarified that a worst case scenario would be low wind conditions and fog / high moisture weather conditions, meaning emissions would dissipate less quickly, but noted that even in these conditions, consequence modelling for single BESS enclosure fires typically shows no levels of concern over 50m meaning a battery incident would be very much a site specific issue rather than an issue significantly impacting the local community.</p> <p><i>Post hearing note: Noting the questions on the recent Tesla fire, the Applicant notes that a fire occurred at the Moss Landing 300MW / 1.2GWh battery building (USA) which started on Thursday 16th January 2025, which the Applicant has addressed below in anticipation of submissions being made in this respect.</i></p> <p><i>Mr Gregory wants to highlight the key safety differences between the Tillbridge indicative BESS design and the Moss Landing Phase 1 battery building. The building houses nearly 4600 battery racks containing nearly 100,000 battery modules. The Moss Landing facility was the largest battery system housed in a building structure.</i></p> <ul style="list-style-type: none"> <i>(a) This fire involved air cooled NMC pouch cells which have been responsible for the majority of BESS failure incidents including McMicken, Liverpool, multiple fires in Korea, and several major US incidents including 3 incidents at Moss Landing. The Tillbridge scheme commits to liquid cooled prismatic cell systems which offer far greater performance and safety advantages.</i> <i>(b) Most BESS liquid cooled, prismatic cell, cabinet or 20ft container designs will house between 16-40 battery modules in 2-8 battery rack / bays. Energy housed in these BESS enclosure designs that are currently commercially available typically range from 750KWh - 5MWh.</i> <i>(c) The Moss Landing facility integrated double stacked battery racks which is a significant safety risk and would not be permitted in any BESS enclosure design considered for the Tillbridge scheme.</i> <i>(d) Reports stated that around 40% of the building was consumed by fire within an 8-hour period. This could equate to 1800-2000 battery racks containing 39,600-44,000 battery modules.</i> <i>(e) If we wanted to compare the battery energy consumed in this fire, then perhaps 480-500MWh of battery systems has burned in that 8-hour period which would equate to 96-100 x 5MWh BESS enclosures (currently the maximum footprint for a 20ft container size) or 123-128 Tesla Megapack 2XLs (3.9MWh) burning simultaneously. A secondary fire incident on Friday 17th January seemingly destroyed the remaining battery systems which would equate to the complete burn and destruction of 240 x 5MWh BESS enclosures or 305 x Tesla Megapack 2XLs (1.2GWh).</i> <i>(f) Highway 1 was shut and up to 1200 residents were evacuated due to this Moss Landing fire. Highway 1 is located in close parallel proximity to Moss Landing, at this distance even a single BESS enclosure fire could impact road visibility.</i> <i>(g) This means that the fire event and the road closures / evacuation procedures are not in any way relevant to any UK BESS scheme incorporating individual BESS enclosures across a single or multiple BESS areas.</i> <p><i>The U.S. Environmental Protection Agency (EPA) concluded supplemental air monitoring in the vicinity of the Moss Landing (Vistra Energy) storage facility on Tuesday 20th January. EPA officials stated: "Results for hydrogen fluoride and particulate matter showed no risk to public health throughout the incident, and smoke from the facility has greatly diminished,"</i></p> <p><i>The EPA began monitoring for hydrogen fluoride, a highly toxic gas produced by lithium-ion battery fires, and for particulate matter on day two of the incident with initial hydrogen fluoride gas monitoring readings coming in at 3 p.m. on Jan. 17. The report showed levels below the threshold that is considered potentially harmful. The EPA installed a total of nine monitoring stations, they were sited to account</i></p>

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	<p><i>for changes in wind direction and potential drift to nearby communities, and air monitoring stations have been installed where EPA's stations had been located to continue air monitoring as the response progresses.</i></p> <p><i>At the peak of the fire (maximum toxic emissions) the smoke plume was estimated to extend to approximately 1000 feet which would probably have ensured that toxic emissions did not impact the local area. Evacuation orders for 1,200 people were lifted on Friday (17th) evening after officials confirmed there was "no threat to human health," the Monterey County Sheriff's Office said in a statement. But residents were advised to close their windows and turn off their air conditioning.</i></p> <p>Aviation Risk The ExA noted that they had received written responses from a number of parties that suggest there is a risk to pilots operating at Sturgate Airport and to people flying aircraft locally. The ExA queried whether this could result in an aircraft getting into difficulty, being unable to land and this impacting the local community and asked the Applicant if any additional assessment had been undertaken on glint and glare, specifically related to these relevant representations.</p> <p>Post-hearing note: Ms Coleman noted that the Applicant would respond in writing on this issue.</p> <p><i>An assessment of glint and glare impacts on aviation receptors is reported within Appendix 17-2: Glint and Glare Assessment of the ES [APP-120] and summarised within Chapter 17: Other Environmental Topics of the ES [APP-048]. As outlined within the British Research Establishment (BRE) document 'Planning Guidance for the Development of Large-Scale Ground Mounted Solar PV Systems' (Ref. 1-12), solar PV panels are designed to absorb, not reflect, irradiation. The intensity of any reflections is similar to that emanating from still water, which is considerably lower than for other manmade materials such as glass, steel or white concrete (Ref. 1-13).</i></p> <p><i>Eight runway approach paths and two Air Traffic Control Towers were assessed in detail at Sturgate Airfield, RAF Scampton and Wickenby Airfield. Only green glare impacts, i.e. those predicted with a low potential for temporary after-image, were predicted for pilots using Runway 27 at Sturgate Airfield, which is an acceptable impact upon runways according to the US Federal Aviation Authority (FAA) guidance (Ref. 1-14). Green glare does not cause temporary flash blindness and happens at an instant with very slight disturbance. As per FAA guidelines, mitigation is only required for green glare when affecting an Air Traffic Control Tower, but not for when affecting pilots. Overall, aviation impacts were therefore assessed as low (not significant). As such, it is not considered likely that the Scheme would lead to major accidents for aircraft flying locally, and it follows that any effects on health potentially resulting from any such accidents are considered equally unlikely.</i></p>
<p>Item 3b – Landscape and Visual Impact</p>	
<p>Methodology – including study area, viewpoints and zones of theoretical visibility, and the approach to cumulative/in-combination effects</p>	<p>Residential Visual Amenity Assessment</p> <p>The ExA noted that a Residential Visual Amenity Assessment (RVAA) has not been undertaken and that this was justified in the Applicant's response to the ExA's First Written Question (FWQ) 1.9.1, as set out in the Applicant's Responses to the ExA's First Written Questions [REP3-062], by reference to Chapter 12: Landscape and Visual Amenity of the ES [REP3-014] at paragraph 12.8.41-45, which refer to Residential Visual Amenity Assessment (RVAA) Technical Guidance Note 2/19, Landscape Institute (2019)</p>

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	<p>(Ref. 1-15). The ExA queried the justification provided at paragraph 12.8.44.a, which refers to views from the Cliff, when other residential properties are located closer to the Scheme, with particular reference to paragraph 4.7 of the RVAA Technical Guidance Note 2/19 which provides that large scale, low profile developments such as solar are unlikely to require RVAA except for properties within very close proximity of 5m to 250m.</p> <p>Mr Nick Allin, on behalf of the Applicant, explained that, with regards to residential visual amenity, a level of importance was placed on the open views from properties on the Cliff due to the significant residual effect as it was more challenging to mitigate these views by planting in comparison to properties around and within the Principal Site. In respect of the Applicant's approach to residential visual amenity, once the initial scoping stage and red line boundaries were established for the Scheme, the Applicant undertook a number of visits to see residents who were considered more likely to be visually affected due to proximity to the Scheme. This then informed the Applicant's proposals for mitigation planting. Mr Allin outlined that the Applicant's approach to visual assessment for all receptors, not just residential, did not focus on individual properties but rather representative viewpoints and that this approach is considered to be proportionate and in line with industry guidance, including the above referenced Technical Guidance Note 2/19 and GLVIA. The Applicant's proportionate approach to assessment and professional judgement determined that an RVAA was not required for any properties, as the Technical Guidance Note 2/19 sets a high bar in terms of when an RVAA is required. On the basis of the Scheme as proposed, the Applicant maintains that this threshold was not met, such that an RVAA was not required. While the Applicant did identify significant effects for some representative viewpoints for residential properties, this was prior to the establishment of mitigation, and for all other circumstances where residential properties are close to the Scheme, there is screening from existing buildings and/or existing hedgerows or trees. Moreover, Mr Allin stated that he was not aware of the other NSIP solar schemes connecting to the Cottam substation requiring an RVAA or requests for viewpoints to be taken from private property to allow further assessment of the properties in close proximity to the Principal Site.</p> <p>Post-hearing note: <i>In response to a query from the ExA regarding whether paragraph 12.8.44 of Chapter 12: Landscape and Visual Amenity of the ES [REP3-062] provided sufficient detail of the justification for the absence of an RVAA, the Applicant agreed to review and update paragraph 12.8.44 to set this out more fully. The Applicant has submitted an updated Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev02)] as part of its Deadline 4 submissions. The Applicant also confirms that a 'Residential Visual Amenity Survey' was submitted as an appendix to the Environmental Statement for Gate Burton, which considered that the RVAA threshold was not met for that scheme and therefore a full RVAA was not carried out. The Cottam and West Burton landscape and visual assessments similarly did not consider that the RVAA threshold was met for any residential receptors.</i></p> <p>Mr Oliver Brown, on behalf of Lincolnshire County Council (LCC), added that LCC were comfortable with the absence of an RVAA and satisfied that significant effects have been identified as part of the assessment but noted that there are still significant residual effects on properties.</p> <p>Zones of Theoretical Visibility (ZTV) Referring to Figure 12-5: Topography and Watercourses of the ES [REP3-022], the ExA queried why, if the west, north and southern boundaries of the Principal Site are of a lower topography than other areas, the ZTVs were based on the topography at outer edge of Principal Site and whether paragraph 12.4.13 of Chapter 12: Landscape and Visual Amenity of the ES [REP3-014] is correct in stating that the outer boundaries are representative of the highest point of the Principal Site.</p>

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	<p>Mr Allin, for the Applicant, explained that there is a very subtle ridgeline which runs within the Principal Site but the highest point on that ridgeline is on the site boundary, and the highest boundary points coincide with the eastern and western parts of the site boundary. While there are lower points on the southern boundary, Mr Allin maintained that these are not material to the extent of ZTV that is displayed. This is largely due to screening from existing hedgerows which is not taken into account in ZTV. Therefore, despite a theoretical worst case existing where visibility might be greater due to lower topography, the realities of the Scheme such as hedgerows and screening mean this lower topography does not make a material difference to the assessment.</p> <p>In response to a query raised by Ms Liz Garbutt, on behalf of 7000 Acres, and the ExA regarding a section shown in the centre of the Principal Site on Figure 12-5: Topography and Watercourses of the ES [REP3-022] that appears to indicate a higher area of topography, Mr Allin clarified that the area is Harpswell Wood, which is excluded from the Order limits with no solar panels included within the relevant area.</p> <p>Post-hearing note: <i>The Applicant agreed to provide a response in writing as to whether the internal boundary around Harpswell Wood had been considered as part of the ZTV. The Applicant confirms that the ZTVs for the solar panels were generated from points at 250m intervals around the boundary to the individual panel areas, i.e. at the field level. Paragraph 12.4.13 of Chapter 12: Landscape and Visual Amenity [REP3-014], which states that the ZTV had been generated from only the external solar panel boundary to the Principal Site, is therefore incorrect. As such, it is confirmed that the ZTVs for the solar panels take into account topographic variations within the Principal Site, including low points along the southern boundary; in addition to locations around 'cut-out' features such as Harpswell Wood. The ZTV is therefore considered to be a robust basis for the LVIA, although the Applicant re-states that the effect of screening by hedgerows and individual trees is not taken into account. An updated Chapter 12: Landscape and Visual Amenity [EN010142/APP/6.1(Rev02)] has been submitted at Deadline 4, with updates made to paragraph 12.4.13 to clarify this point.</i></p> <p>The ExA asked the Applicant to summarise the role of ZTVs in the assessment of landscape and visual effects and their utility in assessing sequential cumulative effects of multiple solar projects.</p> <p>Mr Allin explained that ZTVs are one of the first stages of any landscape and visual assessment (LVIA) and that it is good practice to prepare ZTVs at the outset. However, Mr Allin stressed that ZTVs are only a tool and one element among many (e.g. study area, baseline, and so on) used to determine receptors. For solar schemes, ZTVs are less representative of actual visibility as the majority of a solar scheme is low profile in nature, with the exception of substations which have their own ZTVs in the case of the Scheme. As a result, ZTVs provide an element of the overall LVIA, but are only useful to a point and must be supplemented by extensive site surveys for ground truthing, which the Applicant has carried out numerous times during the application process. Site surveys are generally more useful than ZTVs as they can account for the screening effects of individual trees or hedgerows whereas ZTVs, to the extent that they do include screening from vegetation, can only account for woodlands logged in the nationally available Forestry Commission National Forestry Inventory (2021) and OS Open Data. Mr Allin confirmed that ZTVs in terms of cumulative effects were referred to but reiterated that site observations including of the wider area were of far greater value and that while ZTVs provided some use this diminished rapidly as the viewer moves further away from the site.</p>

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	<p>In response to a query from the ExA regarding whether professional judgements are reflected in the text contained within the ES, Mr Allin confirmed that professional judgements are based on reasoned understanding of the likely uses of the east to west rural roads, for example, some of which have value for residential receptors as a means of recreational route where there are no PRow. Similarly, Mr Allin stated that reasoned judgements had been made in terms of speed of receptors using the A631, the relationships between settlements, the size and character of rural routes, whether PRow exist and the proposals for all four DCOs combined cumulatively.</p> <p>Addressing a point raised by Mr Brown, on behalf of LCC, regarding the level of cumulative visual effects identified for Viewpoints 4 and 7, Mr Allin stated that, in terms of cumulative assessment, the relevant effects are those associated with the Scheme over and above the cumulative schemes. This is because where there are no significant effects in relation to the Scheme, then generally speaking no significant cumulative effect would be expected. While acknowledging the importance of sequential views, Mr Allin emphasised that it is the contribution of the Scheme to the wider impacts associated with the other schemes that is the key part of the cumulative visual assessment.</p> <p>In response to a question from Mr Alex Blake, on behalf of West Lindsey District Council (WLDC), Mr Allin confirmed that professional judgement was used to inform the assessments in Chapter 12: Landscape and Visual Amenity of the ES [EN010142/APP/6.1(Rev02)]. This judgement is carried through to the assessment of cumulative effects in Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev02)], although the detail of these professional judgements is not expressly set out. Responding to a further query from Mr Blake regarding where in the Application does the Applicant provide an overall assessment of the visual effects of the Scheme and their importance, Ms Coleman noted that this is covered in the Planning Statement [REP3-027], which includes an appraisal of the Scheme against its compliance with planning policy applying the planning balance to the Scheme as a whole.</p> <p>Post-hearing note: <i>In response to queries raised by the ExA and LCC regarding the reasoning underlying the conclusions on cumulative impacts associated with sequential views arising for representative viewpoints, the Applicant responds as follows.</i></p> <p><i>With reference to Paragraph 18.13.23 of Chapter 18: Cumulative Effects and Interactions of the ES [EN010142/APP/6.1(Rev02)], the Applicant considers that significant cumulative sequential visual effects are most likely to occur for higher-sensitivity receptors, e.g. those using recreational routes such as PRow and quiet rural lanes where attention is more likely to be focused on the view. Professional judgment relating to the likelihood of certain routes being used by such receptors within and around the Principal Site has informed the assessment of such effects. Broadly, it is considered that:</i></p> <ol style="list-style-type: none"> <li data-bbox="568 1145 2125 1294">a. <i>The A631 is of low sensitivity. Views may be available of the northern part of the Cottam Solar Project from quiet rural lanes east of Corringham that are likely to be of greater recreational value, but these lead only to the A631, where any sequential views (referenced Viewpoint 20) would be at this end of this lane and in the context of moving traffic. Although the A631 provides east-west connectivity and sequential views would be available for receptors travelling along Middle Street, the use of such routes by higher-sensitivity recreational users is considered to be limited.</i> <li data-bbox="568 1299 2125 1415">b. <i>The unclassified Common Lane provides a quiet, rural east-west route through the Principal Site. For receptors travelling east, the shortest route where views of other solar DCO schemes would require use of the A631 and B1398 Middle Street, which are not considered to be attractive routes for recreational users; or the footpath (Hems/787/2) north of Millfield (Viewpoint 13), which although providing an expansive view, provides no onwards walking connection along Middle Street. For receptors travelling</i>

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	<p>west, the shortest distance to a point where views of the Cottam Solar Project are likely to be appreciable will involve a journey west of Sturgate Airfield, returning along Kexby Road, and then south along PRow Gltw/85/1 from Glentworth Grange (referenced by Viewpoint 9); a total of approximately 9km.</p> <p>c. The greatest connectivity of higher-sensitivity recreational routes is to the south of Kexby Road, where bridleways PRow Gltw/85/1 and the onward Fill/767/1 and Fill/85/1 provide links between the rural Kexby Road (at Viewpoint 9) and Willingham Road. Sequential visual effects will arise for recreational users where views of both the Scheme and the Cottam Solar Project are available, including where these routes are likely to be combined as a circuit including bridleway Gltw/88/1 and Fill/88/1 between Glentworth and Willingham. Significant sequential cumulative visual effects for representative Viewpoint 9, from which the Scheme and the Glentworth Oil Well will be visible, are therefore stated in Paragraph 18.3.24, although it is considered these will be non-significant at Year 15 when screening woodland is established.</p> <p>d. The nearest appreciable sequential views with the Gate Burton Energy Park would likely be obtained by travelling along unclassified roads for approximately 6 km, through Kexby and/or Willingham by Stow. The nearest appreciable sequential views with the West Burton Solar Project would likely be obtained by travelling approximately 9 km along unclassified roads and bridleway Stow 70/1 (Wooden Pole Lane), to a point near the A1500.</p> <p>As stated in Chapter 18: Cumulative Effects and Interactions [EN010142/APP/6.1(Rev02)] and with reference to the judgements above, significant sequential cumulative visual effects are therefore expected for Viewpoint 9 (Kexby Road, Glentworth Grange) due to views of the Scheme and the Glentworth Oil Well, along with the Cottam Solar Project by users of the bridleway to the south. Such sequential cumulative effects will be non-significant at Year 15 due to established woodland planting around the Scheme. The significant sequential cumulative visual effects noted for Viewpoints 4, 7 and 8 relate to open views from Middle Street of the Scheme and the Cottam Solar Project which, although from a route that is considered to be less attractive to residential users, has a higher sensitivity due to heritage and residential receptors along the AGLV and for which receptor travelling times between viewpoints are reduced. No significant cumulative effects are expected for representative viewpoints beyond those stated above. The Applicant notes that an updated version of Chapter 18: Cumulative Effects and Interactions [EN010142/APP/6.1(Rev02)] has been submitted at Deadline 4, including amendments to the Landscape and Visual cumulative section to include further information as to where effects that may give rise to sequential views may occur.</p> <p>BESS</p> <p>In relation to where the BESS could be located, the ExA queried whether the BESS could be located anywhere within Work No 2 as shown on the Works Plan [REP2-004], provided they fall within parameters set out within the Outline Design Principles Statement [REP3-029], which includes only two restrictions on BESS location, namely that they must be at least 250m from residential properties and at least 30m from the site of the Glentworth oil site. The ExA asked the Applicant if there were any further restrictions that limit where the BESS could be located and if there was any restriction preventing the BESS being located together in one or two large groupings, rather than spread across the site.</p> <p>Ms Coleman, for the Applicant, stated that the location of the BESS would also be subject to the controls that would be in the detailed Battery Safety Management Plan (BSMP) (which is required to be in substantial accordance with the Framework BSMP [APP-225]) and restricted to areas on the Works Plan [REP2-004]. Ms Coleman added that the ES also acts as a control document as there is an additional restriction under Schedule 17 of the draft DCO [REP3-004] which requires the Applicant to submit a report to the relevant</p>

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	<p>local planning authorities when discharging each requirement to confirm that the effects are no worse than those in the ES. To ensure that the BESS cannot be located next to one another, Ms Coleman confirmed that the Applicant intends to make amendments to the Outline Design Principles Statement [REP3-029] to add maximum parameters for each area where a BESS would be located. These amendments are included in the updated Outline Design Principles Statement [EN010142/APP/7.4(Rev03)] submitted at Deadline 4.</p> <p>Acknowledging the Applicant's impending amendments to the Outline Design Principles Statement, the ExA queried whether Figure 3-1 Indicative Principal Site Layout Plan [AS-055] represents a worst case scenario, given that under the draft DCO and Outline Design Principles as currently drafted the Applicant could theoretically locate all of the BESS units in one location.</p> <p>Ms Coleman explained that Figure 3-1 is an example of what could be constructed within the parameters set out under the Outline Design Principles, however the assessment presented in the ES is based on the worst-case. The Applicant has included various controls to ensure that effects are minimised or mitigated.</p> <p>Post-hearing note: <i>As discussed at the Hearing in the context of the ExA's queries regarding the wording of the Outline Design Principles and draft DCO in respect of the location and layout of BESS, the Applicant has amended both documents to clarify these matters. Updated versions of the draft DCO [EN010142/APP/3.1(Rev05)] and the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)] have been submitted at Deadline 4.</i></p> <p><i>The Applicant also agreed to provide further explanation in writing regarding the parameters in place to control and manage the size, layout and location of BESS and confirm that the ES has assessed the worst-case scenario in terms of potential effects of the BESS. This is provided as Appendix A to this Written Summary. This Appendix explains how the DCO would impose appropriate controls on the BESS both by way of the Outline Design Principles Statement as well as the environmental assessment, the effects of which are locked in via the discharge of requirements process in Schedule 17 of the draft DCO, as well as other restrictions which influence location of the BESS, such as the noise requirement.</i></p> <p><i>In respect of the particular queries raised regarding restrictions on where the BESS could locate and if there was restriction preventing the BESS being located in a small number of locations, the Applicant notes the following design details and controls outlined within the Outline Design Principles:</i></p> <ul style="list-style-type: none"> • <i>The Outline Design Principles require the BESS and Solar Stations to be co-located together in BESS-Solar Station Compounds. Solar Stations, by design, must be located close to the solar PV fields, as they include the relevant equipment for the operation of those panels, and location at greater distances from fields would require excessive and expensive cabling across the site to account for any distance.</i> • <i>Maximum parameters have been set for the BESS-Solar Station Compounds so as to ensure they cannot be built larger than the worst case presumptions of the size of the Compounds as assessed in the ES. This precludes BESS being co-located together in larger areas than these maximum extents.</i> • <i>Maximum parameters in respect of effects also control the extent of BESS and their location within the site. For example, compliance with Requirement 17, in respect of operational noise, will require any BESS installations to be designed such that they comply with the noise levels assessed in the ES (which assumes a spread of smaller areas of BESS throughout the site).</i>

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<p>Assessment of landscape effects</p>	<p>The ExA asked LCC, WLDC and Bassetlaw District Council whether there are any points of dispute with Applicant regarding the assessment of landscape effects within the ES.</p> <p>Representatives from LCC, WLDC and BDC confirmed that they have no issues with the methodology used for the Applicant's LVIA. LCC confirmed their agreement with the outcomes of the Applicant's assessment, WLDC noted that while they agree with the methodology followed to reach the conclusions, they dispute some of the Applicant's conclusions regarding landscape impacts and the weight to be accorded to those impacts under the planning balance. BDC confirmed they agree with the Applicant's approach, as confirmed in their SoCG.</p>
<p>Assessment of visual effects</p>	<p>In response to a query from the ExA, asked Mr Oliver Brown, on behalf of LCC, confirmed that their sole criticism of the Applicant's assessment of visual affects was in relation to Viewpoints 2b, 4 and 20. Mr Brown explained that Viewpoints 2 and 20 are close views of the panels and construction and LCC's concern is that mitigation planting will result in foreshortening of open views, and that mitigation planting will not result in the effect becoming not significant. In respect of Viewpoint 4, LCC's view is that although road users are typically less sensitive, local residents will see the same view regularly and, due to the elevated position, this would be challenging to mitigate against and suggested that mitigation planting at this viewpoint would screen views and be adverse in its own right.</p> <p>Acknowledging Mr Brown's comments, Mr Allin highlighted that there is a balance to be struck between the addition of green infrastructure and mitigation planting and the loss of open views. Mr Allin accepted that Viewpoints 2b and 20 were foreshortened by proposed mitigation planting but maintained that the presence of hedgerows is in keeping with the character of the area when travelling west along Common Lane, while loss of view is not a significant effect when accounting for the sensitivity and susceptibility of receptors on that route. Regarding Viewpoint 4, Mr Allin recognised that there is a loss of an expansive view, but again this will be mitigated by extensive sections of planting, which is in keeping with the hedgerow planting already in place. Further, as there is no footway, this was an unlikely recreational route and therefore the loss of this view, particularly at year 15 once mitigation planting has been established, will not be significant.</p> <p>The ExA queried whether use of narrow, rural roads by pedestrians had been considered in determining receptor sensitivity. Mr Allin confirmed that this had been considered as part of the LVIA and that adopted Neighbourhood Plans also provided a useful evidential baseline to assess routes of value to the local community (Glentworth Neighbourhood Plan 2018-2036; Hemswell and Harpswell Neighbourhood Plan 2022 -2036; Corringham Parish Council (2021). Corringham Neighbourhood Plan 2021 to 2036 and the Sturton by Stow and Stow Neighbourhood Plan). Combined with professional judgment regarding the lack of PRow in the area, it was concluded that there are rural routes used by and of value to the local community within the study area, but that Middle Street was not one of these routes and therefore should not be afforded same level of sensitivity. In response to a further query from the ExA regarding the potential for change in the transport network in the future, Mr Allin reiterated that the Applicant has considered the recreational value and sensitivity of rural routes where it is clear that they are used as such. The entirety of Common Lane is considered less likely to be an attractive route for recreational users based on the current baseline.</p> <p>Mrs Carol Montgomery, a local resident, raised a query regarding the claimed PRow, being a bridleway known as "Low Road" and what type of hedging the Applicant proposed in this location. Mrs Caroline Reeve, for the Applicant, confirmed that the Applicant was aware of the claimed PRow and that this was incorporated into the Scheme design as set out within Figure 3-1 Indicative Principal Site Layout Plan [AS-055]. The draft DCO [EN010142/APP/3.1(Rev05)] also contains mechanisms relating to claimed routes and PRowS.</p>

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	<p>Post-hearing note: The Applicant agreed to provide additional information regarding measures proposed to manage or incorporate the claimed PRow (DMMO371 and DMMO843) "Low Road". The Framework Landscape and Environmental Management Plan (FLEMP) [EN010142/APP/7.17(Rev04)] forms part of the Application and provides a framework for achieving the outline design, as presented in Figure 3-1: Indicative Principal Site Layout Plan of the ES [AS-055]. Paragraph 1.2.11 of the FLEMP [EN010142/APP/7.17(Rev04)] acknowledges the presence of the claimed route confirming that works are only proposed for mitigation and enhancement in this area. The Scheme design has considered the claimed route as though it has been confirmed to ensure that should it be confirmed both the Scheme and claimed PRow can coexist. The land subject to the DMMO is not proposed for development comprising mitigation and enhancement land for biodiversity and archaeology. Further controls are also built into the Scheme through the Works Plans [REP2-004] which only authorise Work No. 9 (habitat management and protection) and 11 (sensitive archaeological site) in this area. These works relate to the provision of green infrastructure and comprise no built areas. The works packages in Schedule 1 of the DCO can only be constructed within the corresponding areas shown on the Works Plans [REP2-004] meaning the areas for ecological enhancement and the archaeological sensitive sites are fixed parameters. In addition, should the claimed route be confirmed, the Framework Public Right of Way Management Plan [REP3-041] includes measures to manage the claimed route during construction should this be required (paragraph 3.1.15). The temporary management of the claimed PRow should it be confirmed is further secured and shown on the Streets, Rights of Way and Access Plans [REP1-005] (PRow – 4/01 and 4/02 of sheet 4 of 24).</p>
Glint and glare	The ExA stated that any further questions on this agenda item would be posed in writing as part of the ExA's Second Written Questions.
Consideration of good design	There was no specific discussion on this agenda item at the Hearing.
Mitigation measures	<p>The ExA asked the Applicant if the power to fell and lop trees under Article 39 of the draft DCO [REP3-004] conflicts with Requirement 7, querying whether the Applicant could use their powers under Article 39 to remove any tree, including newly planted trees under the Landscape and Ecological Management Plan (LEMP), where the Applicant reasonably believes it to be necessary.</p> <p>Ms Coleman explained that this is standard wording adopted from recently made energy DCOs, and that the Applicant would have to comply with Requirement 7 and that there are various controls around vegetation removal within the draft DCO and supporting documents. Ms Coleman referred the ExA to the Applicant's Response to Local Impact Reports [REP 3-061], which sets out the various controls on vegetation removal including the requirement to undertake an arborical impact assessment, while the Framework LEMP [REP3-043] also contains controls on maintenance and monitoring of planting. It was confirmed that the powers in the Articles of the DCO would need to be exercised in accordance with the management plans approved by the Requirements.</p> <p>In response to a query from the ExA as to whether the draft DCO would require any planting to be in accordance with the Indicative Landscape Masterplan [AS-064], Ms Coleman stated that it would as the Masterplan is secured by the Framework LEMP [REP3-043], and the detailed LEMP must be in substantial accordance with the Framework LEMP.</p> <p>Post-hearing note: The Applicant agreed to review the Framework LEMP to clarify that compliance with the Indicative Landscape Masterplan is secured through this document. Whilst the Framework LEMP [REP3-043] referred to the Indicative Landscape Masterplans, the Applicant has updated the Framework LEMP [EN010142/APP/7.17(Rev04)] at Deadline 4 to clarify the commitment.</p>

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	<p>In response to a concern raised by Ms Liz Garbutt, on behalf of 7000 Acres, regarding the Article 39 power to be exercised “near” rather than “within” the Order limits, Ms Coleman confirmed that the “near” was substituted for “within” in the updated draft DCO submitted at Deadline 1. Addressing a further concern raised by Ms Garbutt, for 7000 Acres, relating to the monitoring of planting after five years, Mr Allin confirmed that the Framework LEMP [REP3-043] provides for quarterly monitoring for five years, bi-annual monitoring until year 10 and then annual minoring visits for the remainder of the operational life of the Scheme.</p>
<p>Cumulative effects</p>	<p>The ExA asked the Applicant to explain what the columns in Table 18-16 in Chapter 18: Cumulative Effects and Interactions [REP3-016] showed and to clarify how the conclusions were reached on cumulative impact on the basis of this table, citing Viewpoint 2b in particular where the residual effect is identified as major adverse while the cumulative visual effect is identified as not significant.</p> <p>Mr Allin, for the Applicant, confirmed that the second column of Table 18-16 shows the residual effects arising from the Scheme in isolation, while the final column shows the additional cumulative effect to be added to the residual effect of the Scheme. In respect of Viewpoint 2b, Mr Allin explained that this is a case of professional judgment following the methodology set out in Chapter 18. The view from Viewpoint 2b will be a close-range view of the panels and fencing and then subsequently, when vegetation is matured, a hedgerow. Although there is a theoretical cumulative visual effect from the other schemes, the majority of effects are from the Scheme itself and, as a result, the theoretical visibility of another scheme does not represent a significant cumulative effect over and above residual effect arising from the Scheme in isolation. Mr Allin agreed with the ExA that, in theory, a moderate effect from one of the other DCO schemes in the area plus the Tillbridge Scheme could result in a significant effect but maintained that the conclusions set out in Table 18-16 were accurate and robust.</p> <p>The ExA further queried whether the assessment outlined in Table 18-16 assumed that, in relation to sequential impacts where there is no footway, there are no pedestrian receptors likely to experience views. Mr Allin outlined that, in terms of connectivity, the Applicant has assessed use of rural roads, noting that there is a PRoW that runs from Kexby Road (Glentworth Farm) to Willingham Road] (PRoW Gltw/85/1 within the Principal Site) that provides a local circuit that is well used by local residents and uses part of local roads at Kexby Road. The assessment concludes that there is a significant effect on the Viewpoint 9 on the bridleway and Kexby Road during construction and a significant cumulative effect as the route also passes through the Cottam scheme to the south. However, through mitigation, the impact on this viewpoint is reduced to non-significant. The ExA noted this was a contentious issue and queried if this viewpoint was representative of residents using local lanes and whether the sensitivity of pedestrians using local roads had been considered. Mr Allin confirmed that the Applicant has considered this in respect of Common Lane, for example, but concluded that it was less likely to be used by pedestrians and therefore of lower sensitivity.</p> <p><i>Post-hearing note: An updated version of Chapter 18: Cumulative Effects and Interactions [EN010142/APP/6.1(Rev02)] has been submitted at Deadline 4, which includes amendments to the Landscape and Visual cumulative section to provide further information as to where effects that may give rise to sequential views may occur.</i></p>
<p>Item 3c – Noise</p>	
<p>Effects of noise during construction, operation and decommissioning.</p>	<p>The ExA referenced the Applicant's response to ExQ 1.10.1 which outlines that Appendix 13-4 Noise Modelling [AS-009] was altered to reflect a new figure of 84 dB(A) to account for it being the “A-weighted” equivalent to the original figure, 88 dB. The ExA asked for clarity as to what A-weighted means.</p>

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	<p>Dr Matthew Muirhead, for the Applicant, responded that any sound or noise level is made up of different frequency components. However, the human ear picks up those different components in different ways and is more sensitive to some frequencies than others. The unweighted level of 88 dB was based on all frequencies at all levels whereas the A-weighted level is representative of how much of that sound is picked up by the human ear. This means the A-weighted level is a more appropriate measure for considering the impact of noise on humans, as it reduces the decibel level of the frequencies humans cannot hear as well.</p> <p>The ExA stated that the revised Figure 13-2: Operational Noise Contours [AS-017] shows a change in noise contours in the south eastern corner of the Order Limits (which is Field 93 on Figure 3-1: Indicative Principal Site Layout Plan [AS-055]) and the Applicant's response to ExQ1.10.2 also states that Figure 13-2 was revised to align with the updated Figure 3-1: Indicative Principal Site Layout Plan [AS-055] which moved the BESS and solar stations from the east to west of Field 93. The ExA noted that neither the original or updated indicative layout plan illustrated there being BESS and Solar Stations at the eastern edge of Field 93 and as such the version of Figure 13-2: Operational Noise Contours [AS-017] prior to revision did not align with any submitted indicative site layout in this area. The ExA queried as to whether the results presented in the originally submitted Chapter 13: Noise and Vibration [AS-006] were reflective of the submitted indicative site layout or the (superseded) site layout reflected in the original Figure 13-2, and asked the Applicant to respond.</p> <p>Dr Muirhead, for the Applicant confirmed there was an error in the explanation at ExQ 1.10.2 as the ExA was correct that the original Indicative Principal Site Layout Plan [APP-128] did not show BESS or Solar Stations in the eastern section of Field 93. He agreed to provide confirmation as to the site layout on which the original noise modelling results presented in Chapter 13 were based.</p> <p><i>Post hearing note: The Applicant can confirm that the results presented in the original ES Chapter 13 [APP-044] were reflective of the submitted indicative site layout [APP-128] (and therefore did not contain the same error as seen in the original Figure 13-2 [APP-189]). The Applicant also notes that a revised Chapter 13: Noise and Vibration [AS-006] has been submitted which includes small changes to some of the operational noise levels reported in Table 13-17 and wishes to clarify that these small changes are the result of adjusting the modelled position of the inverters and not as result of indicative site layout changes. The boxes in which the inverters sit had not been set correctly on the local terrain in the noise model and fixing this led to some small (1 dB) changes in noise levels at receptors.</i></p> <p>The ExA noted that it appeared the modelling was based on schemes which are AC-coupled, and queried whether the batteries being DC coupled would have any bearing on noise levels generated by the development. The ExA requested a specification sheet setting out sound power levels for DC-coupled (as opposed to AC-coupled) components.</p> <p>Dr Muirhead, for the Applicant stated he was not aware of DC coupled systems having a greater impact on noise levels generated by the development, but would provide further information in writing. Dr Muirhead, for the Applicant, did note that while a specification sheet can provide an example of the types of levels expected from plant, this would be subject to detailed design. However, this flexibility is not problematic in respect of noise levels as a result of Requirement 17 (Operational Noise Assessment) of the draft DCO [REP3-004] which caps overall noise levels.</p> <p><i>Post-hearing note: Further to the ExA's request, the Dr Muirhead engaged with the Applicant's design team to confirm the difference in components, and therefore noise generated by, DC-Coupled BESS vs AC-Coupled BESS. This confirmed that the primary difference</i></p>

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	<p><i>between the two systems is that DC coupled systems remove the need for an additional inverter between the solar station and the BESS. Otherwise, the components within both systems are largely the same. Dr Muirhead concluded this design difference would be likely to have a positive impact on noise levels, given that inverters are typically the loudest component of the solar station layout, and the DC-Coupled design would reduce the overall numbers of inverters. Dr Muirhead considers this would mean the noise levels included within the modelling for the Scheme, where based on an AC-coupled BESS configuration, would therefore be greater than the likely output of a DC-coupled BESS, and reflect an even more conservative approach to modelling having been applied.</i></p> <p><i>The Applicant notes that it did look to provide both the specifications included within the application modelling and any further specifications which could be provided in respect of BESS. However, AECOM confirmed that these specifications remain subject to commercial confidentiality, as they have been gathered both directly from suppliers and from modelling gathered in other projects. In addition, further to the comment by Dr Muirhead at the hearing, such specifications can only provide example, and will be subject to the final components utilised at the time of detailed design.</i></p> <p>Operational Noise Assessment</p> <p>In response to a question from the ExA seeking clarity on the noise levels secured by Requirement 17 of the draft DCO [REP3-004], Dr Muirhead, for the Applicant, explained that while measured baseline sound data, collected at several locations over a week at various times during the day and night, contextualises the significance of the operational noise levels reported in Chapter 13 of the ES and set out at Table 13-17, compliance with Requirement 17 would have to be achieved through noise modelling. This is because, as outlined in the Applicant's response to ExQ 1.10.11, compliance with Requirement 17 would need to be agreed with the relevant planning authority prior to construction work commencing. Ms Coleman, for the Applicant, added that once detailed design of the Scheme had been finalised a further operational noise assessment would be undertaken to confirm that the levels in the ES chapter are not exceeded by the detailed design.</p> <p>Post hearing note: Ms Coleman agreed following a question from the ExA to update Requirement 17 to more clearly reference the Operational Noise Assessment figures set out in Table 13-17 of Chapter 13. This has been provided for in the updated version of the draft DCO [EN010142/APP/3.1(Rev05)] as provided at Deadline 4.</p> <p>The ExA asked questions about if Requirement 17 was intended to be monitored and enforced during operation of the Scheme, should local residents complain about noise levels arising from development, once the Scheme was constructed and operational.</p> <p>Ms Coleman, for the Applicant explained that Requirement 17 includes a requirement that measures are approved at the point of design and then implemented in accordance with that design. She noted the Local Planning Authority would have a normal compliance role in respect of reviewing the detailed design to ensure modelled compliance with the committed levels. Dr Muirhead, for the Applicant responded to questions of clarification from the ExA, WLDC and LCC as to whether ongoing monitoring could be deployed once components were constructed and operational. He noted that this poses difficulties as such real-time monitoring can be inaccurate, due to the interference of background noise levels, particularly when monitoring at receptors some distance from plant (as opposed to monitoring at source). On this basis, the approach of using modelled data from final specifications (or monitored data at source from routine maintenance) is considered to be more accurate. Dr Muirhead and Ms Coleman agreed to discuss the details of any monitoring and compliance measures as included within the Framework OEMP [REP3-036] further with LCC and WLDC and report back in writing.</p>

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	<p>Post-hearing note: The Applicant has updated Table 3-8 of the Framework OEMP [EN010142/APP/7.9(Rev03)] to clarify that results of the sound monitoring of plant during the operational lifetime of the Scheme, carried out during regular maintenance checks, would be submitted to the relevant planning authority for review and further action where required. This would act as evidence that the operational noise from the Scheme would not exceed throughout its lifetime. In other words, that the data that informed the operational noise assessment, completed at the detailed design stage to comply with Requirement 17, remained valid. The Applicant understands from initial discussions that this amendment is likely to be acceptable to LCC.</p>
<p>Mitigation measures</p>	<p>The ExA sought clarity on the intended mitigation measures to be included in the final design to meet the noise levels required under Requirement 17 of the draft DCO[REP3-004].</p> <p>Ms Coleman, for the Applicant, responded that Requirement 17 was deliberately not prescriptive in terms of which mitigation measures are utilised, due to the uncertainty of specification and design at this stage. This uncertainty means it is unclear if any further mitigation will be required at all, and if any is required, what level of reduction this would need to achieve. Dr Muirhead, for the Applicant, further stated that mitigation measures were likely to include a combination of situating plant as far as possible from receptors (but recognising restrictions due to other disciplines) and siting of the transformers within the substation. The key mitigation measure cited by Dr Muirhead was the sourcing of the quietest possible plant. Other mitigation measures considered by the Applicant includes noise barriers, however, Dr Muirhead noted that at the distances involved they would not be particularly effective as there are no properties immediately behind either substation. Ms Coleman and Dr Muirhead also added that the Framework OEMP Table 3-8 provides additional context as to measures that will be taken to achieve the levels which broadly align with the measure identified in the ES.</p> <p>In response to questions by 7000 Acres as to the assessment and mitigation of construction traffic noise, Dr Muirhead, for the Applicant confirmed that construction traffic noise has been assessed in Chapter 13: Noise and Vibration of the ES [AS-006], and associated changes in traffic noise are set out specifically at Table 13-15. This assessment identified some significant adverse noise effects from HGV traffic but this was only when applying the assumption that all of the traffic was permitted to travel on any route at the same time and this will not be the case. The additional mitigation detailed in Chapter 13 explains how different sections of traffic will be spaced out meaning there will not be HGVs coming down the same road at the same time and with these mitigations in place this is considered to remove the significant effects identified. In response to a further question from the ExA regarding how total cumulative traffic noise was assessed, Dr Muirhead outlined that cumulative traffic was assessed quantitatively and identified significant effects. However, these significant effects were mitigated by the spreading out and coordinating traffic movement as set out in paragraph 2.3.3 and Table 3-8 of the Framework CEMP [REP3-033] which require regular liaison meetings with the other schemes to ensure plans are coordinated, noise and vibration is minimised and the sequencing of traffic movements, so that there is limited overlap from HGVs along the local highway network.</p>
<p>Item 3d – Biodiversity and Ecology</p>	
<p>The effect of the Proposed Development on wildlife at the site throughout the life of the development and beyond.</p>	<p>Birds The ExA requested clarification as to how the Applicant reached the conclusion that some species, including the golden plover and skylark, would obtain a minor benefit from the Scheme when they prefer open habitats, which will be lost given the measures proposed.</p>

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	<p>Mr Neal Gates, on behalf of the Applicant, acknowledged that by creating a solar farm and putting structures into the landscape some species would be displaced. However, the Applicant has embedded large areas of undeveloped land within the Order limits, over 200ha, which will help offset this loss and maintain open landscapes. These measures are the basis for the conclusion of a minor benefit for non-breeding birds as a result of the Scheme.</p> <p>In response to a subsequent query from the ExA regarding the impact on the golden plover and skylark populations, Mr Gates stated that golden plover were recorded during site surveys but these numbers were quite low in terms of the wider Lincolnshire area, and this species is also quite nomadic, with only irregular use of the Principal Site noted. Therefore, the impact of the Scheme on their population would not be expected to be significant, especially as the creation of permanent grassland habitat will help offset the loss of arable habitat. For skylark, the replacement of the habitat, in terms of size, is not like for like, but the replacement grassland habitat will be of higher quality as it will not be subject to the same regular change in the use of the fields associated with modern agricultural activities. This means more space will be available permanently, providing good quality grassland with sympathetic management techniques and allowing species including skylarks to have more nests, more breeding attempts and more successful breeding attempts, allowing the current population to be maintained overall.</p> <p>The ExA queried what the impact on these species would be during construction before the grassland is restored. Mr Gates acknowledged that there will be some disturbance across the Order limits during construction, however the undeveloped areas and Biodiversity Zones will be maintained as such during construction and grassland habitats will be provided in those areas. Construction will also be sequential, meaning that while some areas will be unsuitable as habitat there will still be other suitable areas for species to nest in during construction.</p> <p>Separately, the ExA also noted that Chapter 9: Ecology and Nature Conservation of the ES [APP-040] indicates that the population of ground nesting birds would increase due to lack of predation when nesting under the panels and queried how this would impact on the local bird of prey population. Mr Gates clarified that species like skylark do not tend to nest within the solar panel arrays themselves but will use them for foraging. The nesting habitat is more likely to be found in the undeveloped areas within the Order limits, meaning the overall effects on predators are minimal. As the Applicant is creating extensive areas of permanent grassland, buffers for retained habitat features, hedgerows and making improvements to current hedgerows for the benefit of small birds and mammals, which will be prey for predators, these measures will positively impact on birds of prey.</p> <p>In response to a query raised by Ms Liz Garbutt, on behalf of 7000 Acres, regarding whether displaced species would utilise the new habitats following construction, Mr Gates explained that the habitats to be created are targeted at the specific species identified as present on Site and therefore species should have no difficulties in utilising these new habitats. It was accepted that in the short-term there may be some displacement into wider countryside.</p> <p>Bats Referring to a query raised by WLDC regarding why no tree or structure surveys for bat roosts were undertaken within Order limits despite plans showing that there are existing features which would be suitable for bat roosts, the ExA asked the Applicant to explain why these features had not been surveyed.</p>

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	<p>Mr Gates clarified the Applicant's approach to bat surveys and impact assessment, which followed the mitigation hierarchy, assessing all trees and structures in respect of their potential to support bat roosts. Each feature was then assigned a category which informed the Scheme design for example, where construction access routes should be positioned. Following this assessment, the Applicant has assumed a worst case, meaning that where features are present which could support bats the Applicant has assumed there are bats present and so put in place protective measures such as buffers in appropriate areas (e.g.15m buffer from woodland) to avoid direct impacts. As the Scheme will not directly impact any trees and sufficient protection is provided through buffers to protect species such as bats, it is not necessary or proportionate to undertake detailed surveys to determine if bats are present within any of the identified features. There are also measures set out in the Framework CEMP [REP3-033] which provide that, if during detailed design it is determined that the Applicant does need to do any works to trees, appropriate surveys will be undertaken at that point. Ms Coleman noted that, because the 15m buffer from woodland is secured via the Framework CEMP, if precautionary works has to be undertaken within that buffer (e.g. under Article 39), the protective measures set out under the Framework CEMP would need to be adhered to, meaning that the power to lop or fell trees would need to be exercised subject to those controls.</p> <p>In respect of the query raised by Ms Garbutt, for 7000 Acres, regarding the assessment of bats outside the Order limits, Mr Gates stated that although the Applicant's surveys concentrated on the Order limits, as this is the zone of impact where effects may occur, the Applicant has also considered how the Scheme is designed to maintain connectivity with the wider environment. Consequently, where there are corridors or hedgerows linking woodlands with higher areas of bat activity, the Applicant has looked at how these aspects are designed and connected to areas of woodland and hedgerow outside the Order limits.</p> <p>Addressing the research contained in an article in the Journal of Applied Ecology (Tinsley <i>et al</i> (Ref. 1-16)), referred to by Ms Garbutt, for 7000 Acres, which suggests that ground mounted solar can have impacts on bat flight and feeding, Mr Gates confirmed that the impact assessment set out in Chapter 9: Ecology and Nature Conservation of the ES [APP-040] references the Article and discusses its conclusions in relation to the Scheme. It was noted that the Scheme can be distinguished from those referred to in the Article, as the Article relates to small scale solar schemes where significant habitat enhancement has not been provided, which are extremely important for maintaining connectivity and food resources for bats. The Applicant therefore acknowledges those studies but maintains that they are not comparable in all instances.</p> <p>Water Vole, Otter and Mink The ExA queried why otter and water vole surveys had not been undertaken outside the Order limits and whether this approach adhered to current guidance.</p> <p>Mr Gates outlined that the Applicant used three sources of information to determine the presence of water vole, otter and mink. Firstly, the Applicant carried out a wider desktop study to understand the overall distribution of species in the local area. Secondly, the Applicant collaborated with other solar schemes in the area, looking at the data sets they collected in respect of shared parts of the Scheme such as the Cable Route Corridor, visiting these areas to ground-truth them where necessary. Thirdly, once the Applicant had reviewed the data already collected and established the value of habitats within the Order limits for the species, it considered where it was necessary to undertake specific surveys to fill data gaps to inform the assessment. The combination of these three sets of data determined the baseline of riparian mammals which informed the Applicant's assessment. Finally, a review of the suitability of the watercourses within</p>

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	<p>the Order limits for water vole and otter determined that the vast majority of them were not suitable, which reduced the need to look at additional areas outside of the Order limits. The variety of data sets reviewed by the Applicant, consideration of the overall survey area and proportionality in terms of suitability of habitat and in consideration of the potential impacts from the Scheme, informed the Applicant's conclusion that surveys extending outside the Principal Site would not be necessary.</p> <p>In response to the ExA's query regarding there being no riparian mammal surveys for the Cable Route Corridor and whether these were required, Mr Gates explained that while the Applicant has not undertaken specific surveys, there is data from third party surveys conducted along the Cable Route Corridor. Where appropriate, to re-assess the suitability of these watercourses for riparian mammals the Applicant undertook surveys to ground-truth these locations.</p>
<p>The measures proposed to deliver and maintain biodiversity net gain throughout the life of the project and after its decommissioning.</p>	<p>Noting that the Applicant's Biodiversity Net Gain ("BNG") commitment is to provide a minimum 10% BNG, and the Applicant predicts that the Scheme will result in BNG of 64.55% area based habitat, 17.33% hedgerow habitat and 22.94% of watercourse habitat, the ExA queried how the provision of BNG aligns to the biodiversity that will be lost and species that are relying on existing habitat within the Order limits.</p> <p>Mr Neal Gates, on behalf of the Applicant, explained that the process of determining BNG is a separate process to identifying appropriate mitigation of impacts. For example, a buffer may be proposed to avoid impacts on existing retained habitat features, which is a mitigation measure, but better quality habitat could be created within that buffer which would contribute towards BNG. In terms of aligning with local biodiversity priorities, Mr Gates confirmed that the Applicant has considered all local biodiversity policies for priority habitats and species. Dr Lewis Deacon, for the Applicant, added that the Scheme retains around 50 ha of habitat within the Order limits and that the Applicant is proposing to create over 1,000 ha of new habitat and some small level enhancements to retained habitat by establishing protections around irreplaceable habitats, enhancing planting throughout the Order limits in terms of areas of woodland and trying to replicate the loss of arable field margins around the edge of the Order limits.</p> <p>In response to a subsequent query from the ExA regarding whether the use of buffers to provide BNG would mean that the separation from operational plant is lost, Dr Deacon explained that the habitats that are provided in the buffer zones are not habitats that would for example, support roosting bats as the Applicant would not allow trees to grow in these zones – these areas would potentially support more commuting type habitats. The edge habitats around the solar PV areas would support native plant species as well as proposed biodiversity zones in an attempt to replicate the current field margins, which would mean the current species using these areas are unlikely to be altered. Further, Mr Gates noted that the buffers set out in the design parameters for the Scheme, from an ecological perspective, are there to ensure the retained habitats, e.g., woodland and hedgerows are protected during construction, but that they are of lesser concern during operation of the Scheme in terms of mitigating impacts. This means that these areas can also be used to achieve other benefits in terms of biodiversity.</p> <p>The ExA asked the Applicant to what extent the 1,000 ha of new habitat is being provided on land under the solar panels on the Principal Site, and queried how this will compare to the biodiversity lost from existing arable fields. Dr Deacon set out that, under the panels themselves, following standard guidance and also guidance from the Royal Society for the Protection of Birds (RSPB) (BRE (2014)</p>

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	<p>Biodiversity Guidance for Solar Developments (Ref. 1-17)), modified grassland will be planted to allow colocation of habitat and solar panels as this would cope best with the shady conditions, while neutral grassland would be planted around the edges of the fields.</p> <p>Post hearing note: <i>The area of grassland habitat to be provided underneath solar panels is approximately 710ha, the remaining areas of grassland habitat will largely be provided within the Biodiversity Zones (212ha) and Sensitive Archaeological Sites (72ha). In total, approximately 1,074ha of arable farmland will be converted by the Scheme to other land uses, including the grassland habitats, woodland habitats and solar infrastructure.</i></p> <p>In response to a question from the ExA as to how the BNG requirements are secured under the draft DCO [REP3-004], Ms Alexis Coleman, for the Applicant, explained that the provision of BNG is secured by Requirements 7 and 8. The detail of the planting that will deliver BNG is set out the Framework LEMP [REP3-043], and this is secured under Requirement 7 which provides that the detailed LEMP must be substantially in accordance with the Framework LEMP, while Requirement 8 requires the Applicant to submit a BNG strategy, which must likewise be substantially in accordance with the Framework LEMP [REP3-043]. Paragraph 4.6.2 of the Framework LEMP [REP3-043] contains the Applicant's commitment to minimum 10% BNG in accordance with terms of the BNG Report [AS-062]. This approach mirrors that adopted in the made Order for Gate Burton Energy Park.</p> <p>In response to a point raised by Ms Stephanie Hall, on behalf of LCC, regarding the weight to be attributed to BNG in the planning balance being limited to the 10% that is secured, Ms Coleman agreed that it is the minimum 10% figure that is secured, but noted that the position is more nuanced than this as the Framework LEMP [REP3-043] sets out that the Applicant is committed to achieving at least this level of BNG, and the higher figures contained within the BNG Report were calculated on the basis of the planting proposed in the Framework LEMP, which itself is secured. There are difficulties committing to express percentages above 10% as this may change given detailed design and the trading rules, as well as potential changes in future versions of the BNG Metric. Ms Coleman reiterated that the approach taken for the Scheme is consistent with the made Order for Gate Burton, where the Secretary of State ascribed a "moderate positive benefit" for BNG. Dr Deacon explained that the detailed design for the Principal Site is to be finalised post-DCO consent and stated that if there are minor changes to some of those areas, this would also alter the BNG metric. Consequently, this made it challenging for the Applicant to commit to a figure in excess of 10% BNG.</p> <p>Post-hearing note: <i>While maintaining that the approach adopted is appropriate and consistent with other approved solar DCOs, the Applicant agreed to review the commitments to BNG proposed and consider whether it is feasible to commit to a higher percentage of BNG for the Scheme. The Applicant has updated the Framework LEMP [EN010142/APP/7.17(Rev04)] at Deadline 4 to clarify that the Applicant is committed to delivering BNG in accordance with the draft DCO [EN010142/APP/3.1(Rev05)], which required the Applicant to produce a biodiversity net gain strategy substantially in accordance with the requirements of the Framework LEMP [EN010142/APP/7.17(Rev04)], which, in turn, accords with the terms of the Biodiversity Net Gain Report [AS-062].</i></p> <p><i>The BNG Report includes an express commitment to achieving a minimum of 10% BNG, however, with the implementation of the measures set out within the Framework LEMP (which are secured through Requirement 7 of the draft DCO [EN010142/APP/3.1(Rev05)]), the current plans for the Scheme (as illustrated by the Indicative Landscape Masterplan, which is now appended to the Framework LEMP), are predicted to result in a net gain of 64.44% for area-based habitat units, 17.28% for hedgerow units, and 22.94% for watercourse units. The detailed design of the Scheme would be in substantial accordance with these plans, as</i></p>

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	<p>secured through Requirement 7. The submitted Planning Statement [REP3-027] was written on the basis of the Scheme delivering a minimum of 10% BNG with moderate positive weight attached to this through applying the planning balance. The revisions to the Framework LEMP [EN010142/APP/7.17(Rev04)] described above, in particular the securing of the Indicative Landscape Masterplan as certified document as an appendix to the LEMP, means that greater positive weight should be attached to the delivery of BNG than originally ascribed through the Planning Statement [REP3-027]. Addressing a query from Ms Garbutt, for 7000 Acres, as to whether the time lapse between loss of land and provision of new habitats could result in permanent habitat loss, Dr Deacon explained that the BNG calculation is based on projected values for different habitat units. The BNG period is 30 years, and some habitats will reach maturity before others. Habitats will be monitored and adjusted to make sure habitats reach target condition in the specified time frame to ensure the value assigned to each habitat is created by the end of the 30-year period. This monitoring will ensure the habitats become established, the predicted levels of BNG are achieved, and prevent permanent habitat loss.</p>
<p>Item 3e – Development Consent Order</p>	
<p>Status of Articles to be removed and remaining in the dDCO</p>	<p>Operational period of Scheme</p> <p>The ExA noted that EN-3 states at paragraph 2.10.149 that while an upper limit of 40 years is typical, applicants may seek a different time period. The ExA cited that the Applicant has undertaken assessment of a 60-year life for the Scheme and stated that they wanted to understand how the Applicant had come to choose 60 years as a potential lifespan as opposed to a potentially shorter or longer period.</p> <p>Ms Taylor Power, on behalf of the Applicant, noted that Applicant provided an initial response to this question at ExQ1.6.3. Ms Power explained that the Applicant has been primarily guided by maximising the benefits of the Scheme, as against any adverse impacts, in line with the in line with Critical National Priority (“CNP”) outlined in National Policy Statement EN-1 supporting the generation of renewable energy. She went on to state that the majority of adverse impacts arise from construction of the Proposed Development and not necessarily once it is established and operative. Enabling generation to continue for 60 as opposed to 40 years would enable a further 20 years of renewable energy to be produced, providing significant benefit in line with the CNP, without significant additional adverse effects of a new construction period. Furthermore, Ms Power outlined that the design life of the Scheme, and the typical 40-year operational period of current solar farms reflects current technology, and the design life is likely to improve by the time of construction due to rapid advances in technology. This means solar panels installed may still be operational at 40 years, and decommissioning these too early would remove this benefit.</p> <p>At the point when the panels come to the end of their design life, if there is a period remaining before decommissioning, Ms Power explained it would be a commercial decision as to whether benefit of installing new panels would be borne in the remaining operational period for the Scheme. The amendment made to the draft DCO at Deadline 3 to include a new definition for the date of decommissioning ensures that should the Applicant decide at that stage not to replace Scheme components like panels, then these would need to be decommissioned.</p> <p>In response to a clarifying question by 7000 Acres as to whether replacement of panels would generate a new construction phase at the 40th year of operation, Ms Power responded stating that the Applicant has worked several controls into the draft DCO [REP3-004] and Framework OEMP [REP3-035] to make sure that the replacement of the panels and any other operational development maintenance can only occur in line with the low levels of operational traffic and other operational maintenance impacts assessed within the ES. This is secured within Article 5 of the draft DCO [REP3-004]. This Article does not authorise the carrying out of works that would give rise to</p>

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	<p>materially new or different effects than assessed in ES, that the operational effects would be significantly lower than during the construction phase (the definition of “maintain” itself in the draft DCO restricts wholesale removal, reconstruction or replacement of the authorised development). Ms Power further noted the approach to monitoring and management at paragraph 2.3 of the Framework OEMP [REP3-035], sets out the replacement schedule for the panels and the process whereby every 12 months the undertaker will have to liaise with planning authority in terms of any upcoming maintenance. Panels would only be slowly replaced over time on a piecemeal rather than wholesale basis.</p> <p>Definition of Decommissioning In respect of the additional definition for the date of decommissioning as per WLDC request, the ExA asked how will it be known that the Proposed Development has ceased operation, such that decommissioning must occur?</p> <p>Ms Power responded that it would be communicated between the Applicant and the relevant planning authority to meet the Applicant's responsibility under Requirement 20 of the draft DCO [REP3-004] to provide 12 months' notice of when decommissioning would occur. Should the undertaker fail to do so, it would be in breach of the Requirement, and subject to enforcement. Ms Power explained that WLDC would likely be aware of part of the Scheme not being operational, as the undertaker is obliged to engage with relevant local authorities every 12 months in accordance with paragraph 2.3.2 of the Framework OEMP [REP3-035], as to any replacement of components which are no longer in use and this would act as a natural check in point for WLDC to challenge the undertaker as to why components are no longer being used are not being decommissioned. Further to queries by Mr Shemuel Sheikh, for WLDC, on the drafting of the Framework OEMP [REP3-035], Ms Power agreed that the Applicant would consider further drafting to make this communication clear.</p> <p><i>Post hearing note: The Applicant has included further drafting within paragraph 2.3.2 of the Framework OEMP [EN010142/APP/7.9(Rev03)] at Deadline 4 to include a positive requirement on the Applicant to inform the relevant planning authority when a Scheme Component is no longer operational and requires final decommissioning.</i></p> <p>Waste on Decommissioning Ms Hall, for LCC, noted the design life for various Scheme components within the Framework OEMP [REP3-035], and sought clarity as to how any waste generated by decommissioned components would be managed, given limited capacity within regional landfill facilities.</p> <p>Ms Power, for the Applicant, responded that the Applicant was aware of these concerns as previously raised by LCC and has responded to them in the Applicant Response to Local Impact Reports [REP3-061], including a detailed appendix setting out the management of, and available regional and national capacities for, any waste generated by the Scheme. The parties agreed to discuss any outstanding queries LCC had regarding this appendix through their combined SoCG.</p>
<p>Status of Protective Provisions and views of the relevant Statutory Undertakers</p>	<p>In response to a question from the ExA regarding the status of the Protective Provisions with the relevant Statutory Undertakers Ms Taylor Power for the Applicant provided the following update:</p> <p>Status of Protective Provisions and views of the relevant Statutory Undertakers:</p>

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	<ul style="list-style-type: none"> • Final agreed protective provisions are captured within the latest draft Development Consent Order submitted for Deadline 3 for the following statutory undertakers: <ul style="list-style-type: none"> ○ The Canal and River Trust, as agreed in August 2023. ○ Lincolnshire Fire and Rescue as agreed March 2024. ○ Scunthorpe and Gainsborough Drainage Board and Upper Witham Drainage Board, both of whom confirmed in August 2024 that the standard protective provisions for the protection of drainage authorities included in the draft DCO [EN010142/APP/3.1(Rev03)] are sufficient and no bespoke provisions are required. ○ Gate Burton Energy Park, Cottam Solar Project & West Burton Solar Project – the four developers each have an agreed set of protective provisions, with project-specific versions included in each of their respective DCOs. These were agreed with each of these undertakers in October 2024. ○ Cadent Gas, as agreed in November 2024. In addition, as you know Cadent Gas has also formally withdrawn their objection to the scheme, as addressed to the Planning Inspectorate on 20 December 2024. ○ Anglian Water, as agreed in December 2024. • In addition, the Ministry of Defence, National Gas, Vodafone have all confirmed that they have no assets or apparatus that will be impacted by the Scheme, such that protective provisions are not required. <p>Of the remaining statutory undertakers:</p> <ul style="list-style-type: none"> • Network Rail – Protective provisions have been agreed with Network Rail, however the parties remain in discussion regarding separate agreements that will sit alongside these provisions (those agreements being private as between the parties). These agreements have progressed since the update provided at the first Issue Specific Hearing and the Applicant is confident that these will be resolved within the timescales of the Examination. • EDF – The Applicant and EDF have continued to progress EDF's protective provisions since the update provided at the first issue specific hearing. The bulk of the provisions are agreed, with only a few provisions needing further discussion and resolution (from the Applicant's perspective). At this stage, the Applicant is hopeful these will be resolved for submission at Deadline 4, but in any case is confident that these will be resolved within the timescales of the Examination. • Environment Agency – After discussions had previously been on hold while the EA updated their standard provisions, these were provided to the Applicant on 7 January 2025. The Applicant reviewed and returned comments on these provisions at the beginning of this week. The Applicant's position on the updated provisions remains substantively the same as their previous version, and considers these are minor in nature. The Applicant is therefore confident that these will be resolved within the timescales of the Examination. • Exolum – The Applicant and Exolum have progressed a further round of discussions on Exolum's protective provisions since the update provided at the first issue specific hearing. The Applicant's comments are with Exolum for review and response as of the beginning of this week. The Applicant considers the nature of remaining matters of discussion are minor, and is hopeful these will be resolved for submission at Deadline 4, but in any case is confident that these will be resolved within the timescales of the Examination. • National Grid Electricity Transmission – NGET provided the Applicant with a copy of their standard protective provisions, and the Applicant returned its comments on these to NGET on the 21 November 2024. These comments are still with NGET for

Agenda Item	Applicant's Response
	<p>response. While the Applicant cannot provide exact timescales for resolution at this stage, the Applicant is confident that agreement can be reached within the timescales of the examination.</p> <ul style="list-style-type: none"> • Northern Powergrid – The Applicant and Northern Powergrid have progressed a further round of discussions on Northern Powergrid's protective provisions since the update provided at the first issue specific hearing. The Applicant's comments are with Northern Powergrid for review and response as of 8 November 2024. There is only one matter of remaining in discussion between the parties and the Applicant is hopeful these will be resolved for submission at Deadline 4, but in any case is confident that these will be resolved within the timescales of the Examination. • Uniper– The Applicant and Uniper have progressed a further round of discussions on Uniper's protective provisions since the update provided at the first issue specific hearing, including incorporating Uniper's updated standard protective provisions. The Applicant's comments are with Uniper for review and response as of 18 December 2024. The Applicant considers there are only minor matters remaining in discussion between the parties and so is confident that agreement can be reached within the timescales of the examination. • Trent Valley Drainage Board – Since the first Issues Specific Hearing, Trent Valley IDB engaged an external solicitor to assist them with the review of the drainage board provisions included in the draft DCO. The Applicant provided an undertaking to that external solicitor at the start of December 2024, and re-provided the protective provisions for their review. However, no comments have been received from Trent Valley IDB or their external solicitors since then. The Applicant is continuing to follow up with Trent Valley IDB and their solicitor. While the Applicant cannot provide exact timescales for resolution at this stage, the Applicant will continue to do so, and is confident that agreement can be reached within the timescales of the examination. • E.ON – The Applicant has had some correspondence with E.ON to date, most recently in June 2024 where E.ON confirmed it was no longer a statutory undertaker. The Applicant is in the process of confirming with E.ON the nature of its rights which have been identified in land referencing, and whether these relate to assets which would require protective provisions. While the Applicant cannot provide exact timescales for resolution at this stage, the Applicant will continue to progress these discussions, and is confident that agreement can be reached within the timescales of the examination. • Openreach and iGas Energy – The Applicant received its first response to engagement on any protections required for these undertakers assets in early January 2024. The parties are currently liaising to confirm the nature of impacts (if any) after which the parties will be able to confirm whether the standard protective provisions for telecommunications providers and gas undertakers respectively as already included within the draft DCO are sufficient. While the Applicant cannot provide exact timescales for resolution at this stage, the Applicant will continue to progress these discussions, and is confident that agreement can be reached within the timescales of the examination. • Prowind Cottam Windfarm, Severn Trent Water, Virgin Media, Western Power Distribution – The Applicant wrote to these statutory undertakers in September 2023 enclosing the standard protective provisions applicable to their respective assets/apparatus and offering to commence discussions regarding the inclusion of protective provisions in the draft DCO. No responses were received to that initial correspondence. The Applicant followed up with these parties via email in May 2024 following acceptance of the Application, and again with the commencement of Examination. No responses have been received to date.
<p>Status of the Requirements and views of the Local Authorities.</p>	<p>Local authority comments on draft DCO requirements Ms Stephanie Hall, on behalf of LCC, stated that LCC would like to:</p> <ul style="list-style-type: none"> • be listed as a consultee on discharge of Requirement 7 (LEMP) and 8 (Biodiversity net gain) of the draft DCO;

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	<ul style="list-style-type: none"> • propose alternative wording in respect of Requirement 11 of the draft DCO which would be raised via their Statement of Common Ground (“SoCG”) with the Applicant; • amend Schedule 17(5) to list archaeology among the higher fee rates; • amend the procedure for discharge of requirements in Schedule 17. The Applicant has proposed an 8 week period which LCC considers to be too low and inconsistent with the period for discharge in other solar DCOs and suggests that a period of 10 weeks would be appropriate. <p>Mr Shemuel Sheikh, on behalf of WLDC, stated that WLDC would include proposed drafting changes in writing, but was primarily focussed on the timings for discharge listed in Schedule 17 of the draft DCO. Mr Sheikh proposed that the timings in Schedule 17 should reflect those in the Cottam DCO which provides for 13 weeks for conditions to be discharged and suggested that if the West Burton solar DCO was made that WLDC would ask for this period to discharge conditions to be further extended.</p> <p>Ms Amanda Broadhead on behalf of BDC also requested that Schedule 17 of the draft DCO be amended to provide 13 weeks for the discharge of requirements.</p> <p>Ms Taylor Power, on behalf of the Applicant, noted that the Applicant would address each of these requests directly with the relevant local authorities through their SOCGs. She did however clarify that the latest version of the draft DCO [REP3-004] submitted for Deadline 3 includes LCC as a consultee to Requirement 7 already. In respect of amending the period for the discharge of requirements in Schedule 17 of the draft DCO [REP3-004], Ms Power reiterated the Applicant's position raised at the first Issue Specific Hearing, that urgency is required in proceeding with this Scheme and emphasising that the Scheme has the earliest connection date to the National Grid of the other schemes in the local area. Further, Ms Power also acknowledged that the existing drafting within Schedule 17 of the draft DCO does allow for period to be extended by agreement and in a lot of cases the Applicant would agree to such a request where it was reasonable. The Applicant is, however, wary of agreeing that every response should require such longer periods.</p> <p>Post hearing note: <i>In respect of the matters listed above, the Applicant can confirm that as the position recorded in the relevant SOCGs with the local authorities at Deadline 4:</i></p> <ul style="list-style-type: none"> • <i>Requirement 8 has been updated to include LCC as a consultee within the draft DCO submitted at Deadline 4 [EN010142/APP/3.1(Rev05)]. It is noted that while the agreed changes are in the draft DCO, this is not reflected in the SoCG with LCC as submitted for Deadline 4 (Lincolnshire County Council [EN010142/APP/9.9 (Rev01)]), but will be updated for Deadline 5.</i> • <i>The suggested wording in respect of Requirement 11 requested by LCC is that which is included within the draft DCO. The agreement on this wording is set out in the SoCG with Lincolnshire County Council [EN010142/APP/9.9 (Rev01)] submitted for Deadline 4.</i> • <i>The Applicant has not proposed any changes to Schedule 17 at this stage, and considers the timeframes and fees set are appropriate in line with other NSIP solar schemes, including Gate Burton Energy Park Order. This remains a matter of discussion between the parties.</i>
4. Other Matters	

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	<p>The ExA noted that the NPPF was revised in December 2024, and requested the parties to provide a response explaining how they consider these changes affect the planning assessment for the Scheme.</p> <p>Post hearing note: <i>The Applicant has reviewed the revised NPPF (December 2024) (Ref. 1-22) against the previous December 2023 version to ascertain the relevance of any changes that could be important and relevant matters in the determination of the Application for the Scheme and whether this would amend any elements of the planning appraisal set out in Section 6 of the Planning Statement [REP3-027] submitted at Deadline 3.</i></p> <p><i>The revised NPPF makes it clear at paragraph 5 that the NPPF does not contain specific policies for NSIPs and that applications in relation to NSIPs are to be determined in accordance with the decision-making framework set out in the PA 2008 and relevant NPSs. The Secretary of State is required to determine an application for development consent in accordance with the NPS, which provides the primary policy for decisions by the Secretary of State in accordance with paragraph 1.1.2 of NPS EN-1 (Ref. 1-18). The energy NPSs have largely taken account of the NPPF and the Planning Practice Guidance (NPPG) for England (Ref. 1-19) so that they are aligned. However, the Applicant agrees that the NPPF and NPPG can be important and relevant in decision making with respect to an application for development consent. In particular, this may relate to specific relevant matters or planning policy tests and guidance that is not explicit within the Energy NPS or where NPPG provides further guidance on the interpretation of national policy. This overarching position has not changed from the 2023 version of the NPPF, which is referenced in the Planning Statement [REP3-027].</i></p> <p><i>In terms of the application of policies from the NPPF that were considered important and relevant in relation to the Scheme and incorporated into the Planning Statement [REP3-027], this related to flood risk, noise and agricultural land.</i></p> <p><i>Paragraphs 168 to 169 of NPPF December 2023 has been amended to paragraphs 173 to 177 in the NPPF December 2024 with respect to flood risk. These changes do not amend policy with respect to adopting a sequential risk-based approach to the location of development in areas with a lower risk of flooding and for the exception test to be applied following the application and passing of the sequential test.</i></p> <p><i>The main change relates to paragraph 175 of the NPPF December 2024, which states:</i></p> <p style="padding-left: 40px;"><i>“The sequential test should be used in areas known to be at risk now or in the future from any form of flooding, except in situations where a site-specific flood risk assessment demonstrates that no built development within the site boundary, including access or escape routes, land raising or other potentially vulnerable elements, would be located on an area that would be at risk of flooding from any source, now and in the future (having regard to potential changes in flood risk).”</i></p> <p><i>The above does provide increased flexibility with the sequential test no longer applying to land comprising no built development. The NPPF does not include a definition of what would constitute no built development, but is likely to include some components of the Scheme including ecological and landscape mitigation and enhancement areas. The revisions to the NPPF at paragraph 175 would appear to provide greater flexibility to locate no built development within areas at a higher risk of flooding without applying and passing the sequential test subject to a site-specific flood risk assessment confirming that this would not increase the risk of flooding now or in the future. The Scheme has adopted a sequential approach to the design and layout of the Principal Site locating critical infrastructure within flood zone 1, which comprises the majority of the Site, but does seek (in accordance with the application of that sequential test) to locate some solar</i></p>

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	<p><i>PV panels within flood zones 2 and 3 with the inclusion of embedded mitigation within the design and secured through the Outline Design Principles Statement [REP3-029].</i></p> <p><i>In terms of agricultural land, NPS EN-1 and NPPF December 2023 were broadly aligned in terms of Schemes being required to demonstrate that development of agricultural land is necessary/justified and that areas of poorer quality land should be preferred to those of a higher quality. Where NPS EN-1 and NPPF December 2023 differed was in relation to footnote 62 in the 2023 NPPF which stated that:</i></p> <p style="padding-left: 40px;"><i>“The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.”</i></p> <p><i>NPPF December 2024 has amended the footnote (now 65) removing the need to consider the availability of agricultural land for food production. It is however noted that earlier in May 2024, a Written Ministerial Statement (WMS) (Ref. 1-20) was published on solar infrastructure. This reiterated planning policy in place at the time, including the need to consider the availability of agricultural land used for food production. The amendment to the now footnote 65 excludes the consideration of food production as an important and relevant policy test. Whilst it is acknowledged that WMS may be material in decision making, it is clear that the publication of the NPPF (December 2024) is government policy and supersedes the 15 May 2024 WMS issued by the former Secretary of State for Energy Security and Net Zero. It should be noted, that the current, Labour Secretary of State's statement in the House of Commons on the 18 July 2024 called “Clean Energy Superpower Mission” stated that:</i></p> <p style="padding-left: 40px;"><i>“the biggest threat to nature and food security and to our rural communities is not solar panels or onshore wind; it is the climate crisis, which threatens our best farmland, food production and the livelihoods of farmers”.</i></p> <p><i>In view of the above, the NPPF and NPS EN-1 and EN-3 (Ref. 1-21) are now fully aligned with respect to the use of agricultural land within national planning policy (paragraph 5.11.12 of NPS EN-1) requiring applicants to demonstrate that development of agricultural land is necessary and that impacts are minimised on best and most versatile agricultural land. The Application has demonstrated through its site selection process as set out in Chapter 4: Alternatives and Design Evolution of the ES [APP-035] that it is necessary and justified to use agricultural land and that the use of BMV has been minimised with no significant effects arising in terms of permanent loss. This fully accords with current policy.</i></p> <p><i>The change described above does mean that the Secretary of State should not take into account those representations and submissions made by Interested Parties into examination regarding the loss of food production as a material consideration with this aspect not applying to the overall planning balance falling firmly outside of the remit of planning decision making.</i></p> <p><i>No changes have been made to policy with respect to noise.</i></p> <p><i>The ExA stated that a number of SoCGs have been provided by Applicant at previous deadlines but that some had not progressed sufficiently to provide an update at Deadline 3. The ExA asked parties to progress these as quickly as possible, particularly in light of</i></p>

Agenda Item	Applicant's Response
	<p>matters raised during ISH2 and ISH3 and to provide updates by Deadline 4, as this would inform the ExA's second round of written questions which are due to be issued in February.</p> <p>Post hearing note: <i>The Applicant has sought to progress SoCGs as directed. The status of SoCG's at Deadline 4 are set out in the Statement of Commonality [EN010142/APP/9.4]. The following SoCG's have been updated and are being submitted at Deadline 4:</i></p> <ul style="list-style-type: none"> • <i>SoCG with Canal and River Trust [EN010142/APP/9.20 (Rev02)]</i> • <i>SoCG with Anglian Water [EN010142/APP/9.15]</i> • <i>SoCG with West Lindsey District Council [EN010142/APP/9.8 (Rev02)]</i> • <i>SoCG with Lincolnshire County Council [EN010142/APP/9.9 (Rev01)]</i> • <i>SoCG with Nottinghamshire County Council [EN010142/APP/9.10 (Rev02)]</i> <p><i>The Applicant has not submitted the following SoCGs at Deadline 4 for the following reasons:</i></p> <ul style="list-style-type: none"> • Trent Valley IDB: <i>the Applicant is continuing to engage with Trent Valley Internal Drainage Board regarding protective provisions. The Applicant has provided Trent Valley Drainage Board with a copy of its standard protective provisions for review and comment and is awaiting a response.</i> • Environment Agency: <i>the Applicant is continuing to engage with the EA regarding the outstanding issues within the SoCG. This includes ongoing discussions relating to protective provisions, of which the EAs new standard Protective Provisions were updated in January, and comments relating to crossings of the main river.</i> • Natural England: <i>the Applicant is continuing to engage with NE and is awaiting further comment from NE on outstanding issues relating to soils, ALC surveys and measures within the Framework SMP.</i> • Network Rail: <i>the Applicant and Network Rail are currently discussing the remaining positions within the SoCG and will aim to submit an updated SoCG for Deadline 5.</i> • Other Solar Developers: <i>all positions within the SoCG are agreed apart from the final position relating to the further cooperation agreement. Discussions regarding this are currently ongoing. An updated SoCG is targeted for submission at Deadline 5.</i> • 7000 Acres: <i>the Applicant is continuing to engage with 7000 Acres on the preparation of a SoCG. The applicant held a meeting with 7000 Acres on the 17 December 2024 and has scheduled a further meeting week commencing the 3 February 2025. The SoCG will be updated following this meeting and a draft SoCG will be submitted into examination at Deadline 5.</i> <p>Ms Liz Garbutt, on behalf of 7000 Acres, raised that health issues had not been fully addressed during ISH3 and requested a further hearing in this respect. The ExA noted this request.</p> <p>Ms Alexis Coleman for the Applicant stated that the Applicant would provide a post hearing note on the how the Applicant calculated the overplanting ratio. Post hearing note: <i>This is provided with the body of the Written Summary of the Applicant's Oral Submissions at Issue Specific Hearing 2 [EN010142/APP/9.30]</i></p>
5. Actions Review	
	<p>The ExA stated that they would issue further written questions or other post-hearing actions in writing.</p>

References

- Ref. 1-1. IEMA (2022) Determining Significance For Human Health In Environmental Impact Assessment. Accessed on 1/11/2024 at: [REDACTED]
- Ref. 1-2. Wales Health Impact Assessment Support Unit (2021). Health Impact Assessment: A Practical Guide. Accessed on 28/01/2025 at: [REDACTED]
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- Ref. 1-4. North Kesteven District Council (2023). Central Lincolnshire Local Plan – Health Impact Assessment for Planning Applications: Guidance Note. Accessed on 28/01/25 at <https://www.n-kesteven.gov.uk/sites/default/files/2023-08/Health%20impact%20assessment%20for%20planning%20applications%20guidance%20note.pdf>
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- Ref. 1-6. Nottinghamshire County Council (2019). Nottinghamshire Spatial Planning and Health Framework 2019 to 2022. Accessed on 28/01/25 at <https://www.nottinghamshire.gov.uk/media/2321754/notts-spatial-planning-health-framework.pdf>
- Ref. 1-7. Nottinghamshire County Council (2022). Nottinghamshire Joint Health Wellbeing Strategy 2022-2026. Accessed on 28/01/25 at <https://www.nottinghamshire.gov.uk/media/4350014/nottinghamshirejointhehealthwellbeingstrategy2022-2026.pdf>
- Ref. 1-8. Lincolnshire County Council (2024). Joint Health and Wellbeing Strategy 2024. Accessed on 28/01/25 at [REDACTED]
- Ref. 1-9. Fthenakis and Yu (2013). Analysis of the potential for a heat island effect in large solar farms. Conference Record of the IEEE Photovoltaic Specialists Conference. DOI: 10.1109/PVSC.2013.6745171
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- Ref. 1-11. Health and Safety Executive (2001). Reducing risks - protecting people: HSE's Decision Making Process. Accessed on 28/01/25 at <https://www.hse.gov.uk/enforce/assets/docs/r2p2.pdf>
- Ref. 1-12. BRE (2014). Planning Guidance for the Development of Large-Scale Ground Mounted Solar PV Systems. Accessed on 28/01/25 at [REDACTED]
- Ref. 1-13. Pager Power (2022). Solar Photovoltaic Glint and Glare Study. Stansted PV Scheme Manchester Airport Group.
- Ref. 1-14. Federal Aviation Authority (2010). Technical Guidance for Evaluating Selected Solar Technologies on Airports.
- Ref. 1-15. Landscape Institute (2019). Residential Visual Amenity Assessment (RVAA): Technical Guidance Note 2/19. Accessed on 28/01/25 at [REDACTED]
- Ref. 1-16. Tinsley, Elizabeth & Froidevaux, Jeremy & Zsebök, Sándor & Szabadi, Kriszta & Jones, Gareth. (2023). Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity. Journal of Applied Ecology. 60. 1-11. 10.1111/1365-2664.14474.
- Ref. 1-17. BRE (2014). Biodiversity Guidance for Solar Developments. Eds G E Parker and L Greene. Accessed on 28/01/25 at [REDACTED]
- Ref. 1-18. Department for Energy Security and Net Zero (2024). Overarching National Policy Statement for Energy (EN-1). Accessed on 28/01/2025 at <https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1>

- Ref. 1-19. Department for Levelling Up, Housing and Communities. Planning Practice Guidance (2024). Accessed on 28/01/2025 at: <https://www.gov.uk/government/collections/planning-practice-guidance>
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- Ref. 1-21. Department for Energy Security and Net Zero (2024). National Policy Statement for Renewable Energy Infrastructure (EN-3). Accessed on 28/01/2025 at <https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3>
- Ref. 1-22. Department for Levelling Up, Housing and Communities (2024). National Planning Policy Framework (NPPF). Accessed on 28/01/2025 at <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

Appendix A

BESS Definitions Update

Appendix A BESS Definitions Update

1.1 Introduction

1.1.1 The Applicant has updated terms used for Battery Energy Storage Systems (BESS), in order to improve the understanding of the Application documents (including those that will become certified documents if consent is granted) and to clarify what parameters have been assessed within the Environmental Statement (ES). At Deadline 4, the Applicant has submitted the following documents with the updated definitions for BESS:

- a. **Draft Development Consent Order (DCO) [EN010142/APP/3.1(Rev05)];**
- b. **Explanatory Memorandum [EN010142/APP/3.2(Rev02)];**
- c. **Chapter 3: Scheme Description of the Environmental Statement (ES) [EN010142/APP/6.1(Rev03)];**
- d. **Outline Design Principles Statement [EN010142/APP/7.4(Rev03)];** and
- e. **Framework Battery Safety Management Plan (FBSMP) [EN010142/APP/7.13(Rev01)].**

1.1.2 This Appendix provides further explanation of the updated terms, provides a summary of the parameters in place to control and manage the size, layout and location of BESS, and considers whether the changes to the terms require any further updates to the assessments reported within the Application documents.

1.2 Summary of Updated Terms and Parameters

1.2.1 The description of Work No 2 within Schedule 1 of the **draft DCO [EN010142/APP/3.1(Rev05)]** has been updated to read as follows:

“Work No. 2

— battery energy storage systems (BESS) including —

- a. *battery modules;*
- b. *an enclosure protecting the battery modules comprised in Work No. 2 (a) and ancillary equipment including liquid cooling systems and explosion prevention systems;*
- c. *heating, ventilation and air conditioning (HVAC) either housed within the enclosures comprised in Work No. 2(b), attached to the side or top of the enclosures, or located separately from but near to the enclosures;*
- d. *monitoring and control systems housed within the enclosures for Work No 2(b) or located separately in its own enclosure or control room;*
- e. *DC/DC converter;*
- f. *fire safety infrastructure, mitigation and control measures including:*
 - i. *fire service access,*
 - ii. *fire compartmentation measures,*

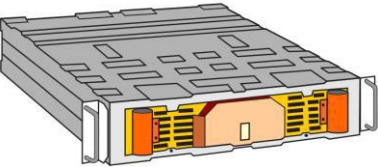
- iii. *water storage tanks and hydrants,*
 - iv. *impermeable membrane surrounding Work No 2(b) which directs fire water to a swale for containment and a sump and drain valve to allow the extraction of contaminated fire water,*
 - v. *hard standing to accommodate emergency vehicles,*
 - vi. *parking spaces; and*
- g. *electrical cables connecting to Work No. 1(b), and Work No. 3.”*
- 1.2.2 **Table 1** presents a detailed explanation of the parameters for Work No 2 established through the updated **Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]** and provides illustrations for the terms. It is also noted that the updated terms reflect the Scheme shown on **Figure 3-1: Indicative Principal Site Layout Plan** of the ES [AS-055].
- 1.2.3 However, in summary Work No. 2 and the **Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]** have been amended to more clearly set out how BESS and Solar Stations will be co-located on the site, the sub-areas and components within these co-located Compounds, and to adjust the parameters for the number and size of these features so that these clearly reflect that these are co-located components. This does not change the design approach which has already been applied within the ES, but rather ensures this is clearly captured and set as restrictions within the **Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]**.
- 1.2.4 It is noted that in the tracked change version of the **Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]** it may at first appear as though significant changes have been made. This is largely due to some design principles being moved rather than deleted. It also reflects the change to provide a maximum footprint for the BESS-Solar Station Compounds and the subsequent removal of parameters for sub-components. This is intended to more clearly restrict the maximum parameter of any co-located area of BESS, per the comments from the Examining Authority at the ISH1 and ISH3, and to make the overall number and details of parameters simpler and more streamlined for the relevant planning authorities to apply.
- 1.2.5 Specifically, the main changes are:
- a. A new definition is created for BESS-Solar Station Compounds, which reflects the co-located components.
 - b. A new definition is created for “BESS Enclosures” which defines the structures or containers holding the battery modules. There may be multiple BESS Enclosures within each BESS-Solar Station Compound, ensuring that fire safety infrastructure and Solar Stations can be sited efficiently and service multiple BESS.
 - c. There will be up to 50 BESS-Solar Station Compounds across the Principal Site. The reference to “140” BESS, which reflected the above point that there may be multiple BESS Enclosures in a BESS-Solar Station Compound, has been removed, to avoid confusion.
 - d. The maximum footprint of a BESS-Solar Station Compound has been included, which replaces the footprint of the individual components (e.g.

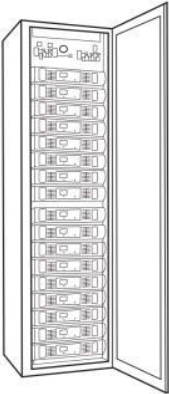

BESS Enclosures and Solar Stations). This ensures the sizing of each BESS-Solar Station Compound and the collocated components within it are managed together.

1.2.6 Finally, site specific controls have been added for:

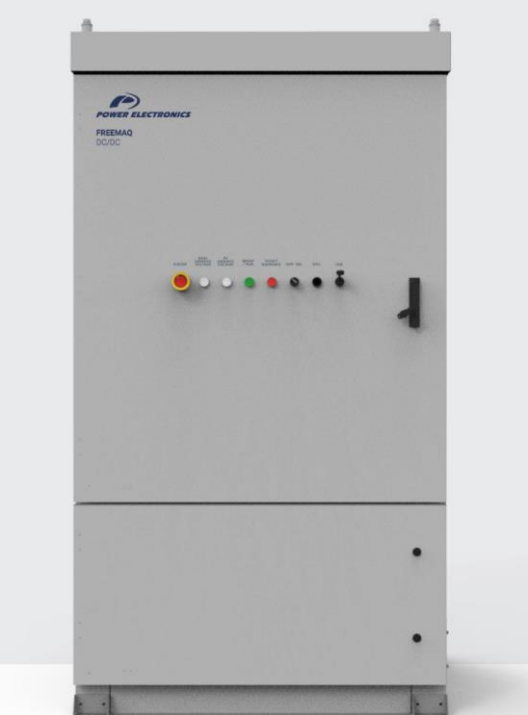
- a. A restriction on BESS-Solar Station Compounds within Field 92, the Field adjacent to East Cottage.
- b. A restriction on BESS-Solar Station Compounds within 30m of the existing Glentworth K Oil Site and the area granted planning permission under ref. PL/0135/22 to construct a hydrocarbon wellsite.

Table 1: Updated Terms and Parameters

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
Battery Energy Storage System	BESS is the overarching term for Work No. 2 which comprises the BESS Enclosures and ancillary equipment described above, DC/DC converters, associated fire safety infrastructure and electrical cabling, as set out within Work No. 2 (a) to (g) in Schedule 1 of the draft DCO [EN010142/APP/3.1(Rev05)] .	<p>The foundations for the BESS Work Nos 2(a) - (e) will comprise either a reinforced concrete base to a maximum depth of 1m, with the maximum width and length of foundations for these components being the length +0.5m and the width +0.5m of the BESS Enclosure and DC/DC converter; or a piling solution may be required, depending on the results of geotechnical surveys. If a piling solution is required, piles will be up to a maximum depth of 12m.</p> <p>Also refer to the parameters of a 'BESS-Solar Station Compound' below.</p>	n/a
Battery modules (Work No. 2(a))	Work No. 2(a) has been updated from "BESS" to "battery modules" to avoid any repetition in the use of the term BESS. This refers to the batteries themselves. There will be several battery modules, arranged in racks, included in each BESS Enclosure.	N/A – as the battery modules will be captured entirely within the BESS Enclosures (Work No. 2(b)). Total numbers of battery modules per BESS Enclosure are not provided as this will differ based on the layout of the BESS Enclosure (including the layout and inclusion of ancillary equipment, described below), and will not affect overall effects.	

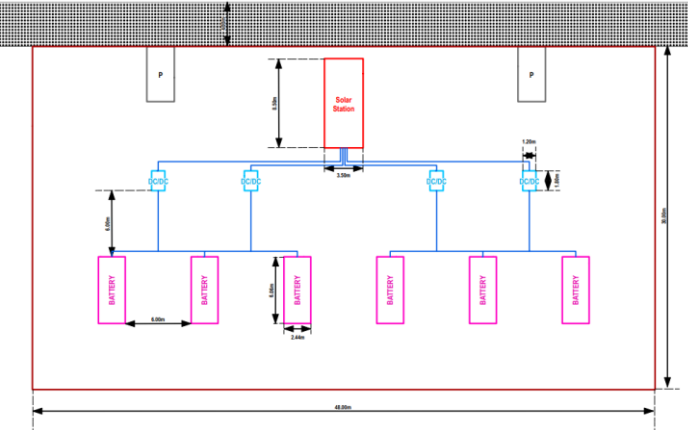
Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
			 <p data-bbox="1384 756 2063 900"><i>Typical enclosed module and a rack of modules, adapted from Framework Battery Safety Management Plan [EN010142/APP/7.13(Rev01)].</i></p>
<p data-bbox="114 914 304 1058">BESS Enclosure (Work No. 2(a) and (b))</p>	<p data-bbox="315 914 752 1246">Battery modules (Work No. 2(a)) will be located in individual BESS Enclosures (Work No. 2(b)), an illustrative example of which is shown on Plate 3-5 of Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev03)].</p> <p data-bbox="315 1283 734 1391">Each BESS Enclosure will also include ancillary equipment, including racking</p>	<p data-bbox="763 914 1364 1391">The updated Outline Design Principles Statement [EN010142/APP/7.4(Rev03)] has removed specific parameters for the scale of BESS Enclosures, and other components within the BESS, on the basis that the ES and project design has instead assessed the overall parameters for the BESS-Solar Station Compounds, outlined below, as the appropriate description of the overall layout of combined components. This also ensures the outline design principles are simpler, and therefore more</p>	

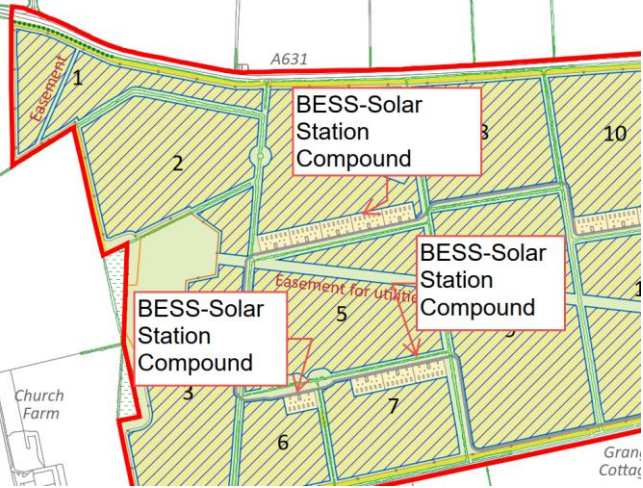
Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
	<p>to hold the battery modules, internal liquid cooling systems and explosion prevention systems.</p> <p>Heating, ventilation and cooling (HVAC) systems (Work No. 2(c)) will either be housed within the BESS Enclosures, be attached to the side or top of them, or be located near them. In addition, monitoring and control systems (Work No. 2(d)) will be housed within the BESS Enclosures or be located separately in its own enclosure or control room. The Work No. 2 description has been updated to remove the previous entry for “battery management system” (previously Work No. 2(e)), on the basis that this is captured within the term “monitoring and control systems” (Work No. 2(d)) and so was an unnecessary duplication.</p>	<p>straightforward for the relevant planning authority to enforce in final detailed designs and construction.</p>	<p><i>Adapted from Plate 3-5 in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev03)]</i></p>

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
DC/DC Converter (Work No. 2(e))	<p>Each BESS Enclosure will connect to a DC/DC converter to keep cabling as short as possible and losses low.</p> <p>The DC-coupled design means that the BESS Enclosures (Work No. 2(b)) need to adjoin the Solar Stations (Work No. 1(b)) to reduce the number of times in which electricity is inverted for improved efficiencies in storing energy before it is released to the grid. In turn, the Solar Stations must be located near the solar PV areas (Work No. 1(a)), to avoid excessive and expensive cabling across the Principal Site. As such, BESS would not be sited in just one location but would need to be dispersed across the Principal Site.</p>	<p>As above, for BESS Enclosures, the parameters are instead captured in the overall BESS-Solar Station Compounds.</p>	 <p><i>Adapted from Plate 3-6 in Chapter 3: Scheme Description of the ES [EN010142/APP/6.1(Rev03)]</i></p>
Fire safety infrastructure	<p>The definition for BESS (Work No. 2) also includes a broad definition for fire safety</p>	<p>The Outline Design Principles Statement [EN010142/APP/7.4(Rev03)] provides that fire safety infrastructure</p>	<p>Further explanation of the nature of fire safety infrastructure has been included in the FBSMP [EN010142/APP/7.13(Rev01)].</p>

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
(Work No. 2(f))	<p>infrastructure to be co-located alongside BESS (Work No 2(f)).</p> <p>This includes those elements of fire safety infrastructure which are external to the BESS Enclosures (as BESS Enclosures have been defined to include internal cooling and explosion prevention systems). This includes:</p> <ul style="list-style-type: none"> i. fire service access, ii. fire compartmentation measures, iii. water storage tanks and hydrants, iv. impermeable membrane surrounding Work No 2(b) which directs fire water to a swale for containment and a sump and drain valve to allow the extraction of contaminated fire water, v. hard standing to accommodate emergency vehicles; and vi. parking spaces. 	<p>may be co-located within BESS-Solar Station Compounds or otherwise may be located nearby but connecting to the BESS-Solar Station Compounds. This reflects that several of the mechanisms listed in Work No. 2(f) will extend beyond the compounds themselves, for example access roads for fire service. As outlined in the FBSMP [EN010142/APP/7.13(Rev01)], the Principal Site may also provide for the connection of water storage tanks between BESS-Solar Station Compounds via a pipe and pressure-fed hydrant system to ensure greater provision of water for fire safety across the Principal Site.</p> <p>The Outline Design Principles Statement [EN010142/APP/7.4(Rev03)] also provide that any components making up the fire safety infrastructure (for example water tanks) must be a maximum of 4m in height. Overall footprint parameters are not appropriate for the fire safety infrastructure given the broad nature of that infrastructure (eg access roads, which would be located across the Principal Site).</p>	

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
Electrical cabling (Work No. 2(g))	Work No. 2(g) also provides for electrical cabling to connect the BESS to the Solar Stations (Work No 1(b)) and the Onsite Substations (Work No 3). This cabling will be underground. As outlined below, the footprint of this cabling is not confined to the BESS-Solar Station Compounds, given it will need to cross the Principal Site to connect to the Onsite Substations.	n/a	n/a
Solar Station (Work No. 1(b))	<p>Each Solar Station will be comprised of a Direct Current (DC)/Alternating Current (AC) inverter and a Low Voltage (LV)/Medium Voltage (LV/MV) transformer, including switchgear.</p> <p>Inverters, transformers and switchgear forming part of the Solar Stations will be decentralised. These will either be housed together within a container placed on a</p>	<p>A concrete foundation slab will be used for each of the inverters, transformers and switchgear within each Solar Station (Work No 1(b)), with a levelling layer of thick sand underneath the slab with a maximum depth of 1m.</p> <p>The maximum width and length of each foundation slab for each component (inverters, transformers and switchgear) is the length +0.5m and the width +0.5m of the component.</p> <p>Also refer to the parameters of a 'BESS-Solar Station Compound' below.</p>	n/a

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
	concrete foundation, or housed outside, with a foundation slab for each component (inverters, transformers and switchgear).		
<p>BESS-Solar Station Compound (Work Nos. 1(b) and 2(a), (b), (c), (d) and (e))</p>	<p>All Solar Stations (Work No 1(b)) and BESS (Work No 2) will be co-located (referred to as a “BESS-Solar Station Compound”), with the exception of the fire safety infrastructure (Work No 2(f)) and electrical cabling (Work No 2(g)) which may be co-located within the BESS-Solar Station Compound or otherwise may be located nearby but connecting to the BESS-Solar Station Compound.</p> <p>Each BESS-Solar Station Compound may include multiple BESS Enclosures and ancillary equipment per Solar Station. The general layout of the BESS-Solar Station Compounds would be uniform</p>	<p>There will be up to a maximum of 50 BESS-Solar Station Compounds distributed across the Principal Site.</p> <p>The maximum footprint of a BESS-Solar Station Compound will be up to 212m in length by 30m in width. It is noted that this is an increase from the smaller BESS Areas shown in the previous Outline Design Principles Statement [REP3-029]. That had assumed that several of the smaller BESS Areas would be co-located together. While larger, this new footprint therefore places a stricter restriction to ensure the overall areas of BESS-Solar Station Compounds cannot exceed these maximum parameters. Components within the BESS-Solar Station Compounds and associated fire safety infrastructure will be a maximum of 4m in height.</p>	 <p>The diagram shows a rectangular compound with a total length of 212m and a width of 30m. At the top center is a 'Solar Station' (red box). Below it are two inverters (blue boxes) connected by a busbar. Further down are six battery enclosures (pink boxes) arranged in two groups of three. Dimensions are provided: 12m from the Solar Station to the first inverter, 1.5m between inverters, 1.5m from the second inverter to the first battery, 1.5m between battery enclosures, and 1.5m from the last battery to the bottom boundary. Two 'P' symbols are located at the top corners. A height dimension of 4m is indicated for the battery enclosures.</p> <p><i>Illustrative plan adapted from Figure 3-2 of the ES [APP-129].</i></p>

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
	<p>across the Scheme, but each Compound would comprise a differing number of BESS Enclosures and Solar Stations to meet technical and operational requirements.</p>	<p>Structures within BESS-Solar Station Compounds will be finished in either shades of white, grey or green.</p> <p>To avoid adverse noise effects on residential properties in close proximity to the Scheme, BESS-Solar Station Compounds will not be located within 250m of a residential property.</p> <p>To avoid adverse noise effects on residential properties in close proximity to the Scheme, BESS-Solar Station Compounds will not be located within Field 92.</p> <p>To avoid safety concerns, BESS-Solar Station Compounds will not be located within 30m of the existing Glentworth K Oil Site and the area granted planning permission under ref. PL/0135/22 to construct a hydrocarbon wellsite.</p> <p>It is noted, in terms of additional controls over the siting of the BESS-Solar Station Compounds, when the Applicant seeks to discharge Requirement 5 for approval of the detailed design of the Scheme's layout, including location of the BESS-</p>	 <p>The diagram is a site plan showing the layout of ten BESS-Solar Station Compounds, numbered 1 through 10. The compounds are distributed across a field area. Key features include: <ul style="list-style-type: none"> Compounds 1, 2, 3, 5, 6, 7, 8, 9, and 10: These are the BESS-Solar Station Compounds, each containing a different number of BESS enclosures and solar stations. Easements: A red line indicates an 'Easement' along the top boundary, and another red line indicates an 'Easement for utility' near compound 5. Church Farm: Located to the southwest of the main compound area. Gran Cottage: Located to the southeast of the main compound area. Other Labels: 'A631' is labeled at the top, and 'Gran Cottage' is labeled at the bottom right. </p> <p><i>Adapted from Figure 3-1 [AS-055], demonstrating BESS-Solar Station Compounds, each with a varying number of BESS and Solar Stations.</i></p>

Term	Description	Parameters within the Outline Design Principles Statement [EN010142/APP/7.4(Rev03)]	Illustration
		<p>Solar Station Compounds, the Applicant will need to demonstrate (1) that the BESS-Solar Station Compounds have been designed in accordance with the relevant Outline Design Principles and (2) pursuant to the procedure set out in Schedule 17 to the draft DCO, that the effects resulting from the detailed design submitted for approval are no worse than those set out in the ES. Part (2) of this process is an additional check to ensure BESS-Solar Station Compounds could not be grouped together in such a way that introduced materially new or materially different environmental effects (e.g. in relation to noise or visual) compared to those in the ES. Other controls and design requirements would also influence the siting of the BESS-Solar Station Compounds, such as Requirement 17 which relates to operational noise, as explained below, and the locational requirement for Solar Stations to co-locate next to the solar PV panel areas.</p>	

1.3 Review of Environmental Assessments

- 1.3.1 To provide assurance to the Examining Authority that the updated parameters have been appropriately assessed in the ES as currently drafted, the Applicant has outlined a full explanation of the parameters as against the original assessments to confirm this.
- 1.3.2 The following technical chapters of the ES and their associated appendices assess the proposed site-wide works as shown by **Works Plan [REP2-004]** and are not dependent on the specific parameters for BESS, summarised in **Table 1**:
- a. **Chapter 6: Air Quality [APP-037];**
 - b. **Chapter 7: Climate Change [APP-038];**
 - c. **Chapter 9: Ecology and Nature Conservation [APP-040];**
 - d. **Chapter 11: Human Health [APP-042]**
 - e. **Chapter 14: Socio-economics and Land Use [APP-045];**
 - f. **Chapter 15: Soils and Agriculture [APP-046];**
 - g. **Chapter 16: Transport and Access [APP-047]; and**
 - h. **Chapter 17: Other Environmental Topics [APP-048].**
- 1.3.3 As such, the updated terms and parameters, summarised within **Table 1**, do not change these assessments and their conclusions remain valid. Each of the remaining technical assessments are further considered below.

Chapter 8: Cultural Heritage

- 1.3.4 The assessment of impacts on below ground archaeological remains reported within **Chapter 8: Cultural Heritage** of the ES **[APP-039]** considers the proposed site-wide works as shown by **Works Plan [REP2-004]**. It is assumed that the majority of the Principal Site, with the exception of areas where no works are proposed (such as the Sensitive Archaeological Sites), would be subject to below ground disturbance. The maximum depth of foundations and piling required for the BESS and the Solar Stations has been considered. These parameters have not changed since the submission of the Application.
- 1.3.5 The assessment of impacts on built heritage assets is based on the illustrative Scheme layout shown on **Figure 3-1** of the ES **[AS-055]**, which fits within the parameters summarised within **Table 1** of this document. The assessment also relies on the principles of landscaping secured through the **Framework Landscape and Ecology Management Plan (FLEMP) [EN010142/APP/7.17(Rev04)]**.
- 1.3.6 Given the landscape mitigation committed to, the 250m buffer from residential receptors (which includes historic farmsteads) and that the height of BESS-Solar Station Compounds is only up to a maximum of 0.5m taller

than the surrounding solar PV panels at maximum tilt, it is not considered likely that there would be a change in effects, if the locations of the BESS-Solar Station Compounds changed from those shown on **Figure 3-1** of the ES **[AS-055]**, in accordance with the flexibility provided by the **Works Plan [REP2-004]**.

- 1.3.7 As such, there is no change to the assessment of impacts on any of the heritage receptors reported within **Chapter 8: Cultural Heritage** of the ES **[APP-039]** and it is considered that worst-case effects have been reported within the chapter.

Chapter 10: Water Environment and associated appendices

- 1.3.8 **Chapter 10: Water Environment** of the ES **[REP3-012]** considers the maximum depth of foundations and piling required for the BESS and the Solar Stations to determine the potential effects on groundwater receptors. These parameters have not changed since the submission of the Application.
- 1.3.9 With regards to the impacts on surface water receptors, **Chapter 10: Water Environment** of the ES **[REP3-012]** and **Appendix 10-2: Water Framework Directive Extended Screening and Scoping Assessment [APP-096]** refer to the 10m buffer from watercourses for the siting of all Scheme infrastructure, which has been committed to within the **Framework Construction Environmental Management Plan (CEMP) [REP3-033]**.
- 1.3.10 Furthermore, there is no change required to the drainage design included within **Appendix 10-4: Outline Drainage Strategy** of the ES **[APP-098]**. With no change to the drainage strategy, there is also no change to the assessment presented within **Appendix 10-3: Flood Risk Assessment** of the ES **[EN010142/APP/6.2(Rev02)]**.
- 1.3.11 As such, there is no change to the assessment of impacts on any of the water environment receptors reported within **Chapter 10: Water Environment** of the ES **[REP3-012]** and it is considered that worst-case effects have been reported within the chapter.

Chapter 12: Landscape and Visual Amenity

- 1.3.12 Similarly to **Chapter 8: Cultural Heritage [APP-039]**, the assessment of impacts on landscape and visual receptors is based on the illustrative Scheme layout shown on **Figure 3-1** of the ES **[AS-055]**, which fits within the parameters summarised within **Table 1** of this document. The assessment also relies on the principles of landscaping secured through the **Framework Landscape and Ecology Management Plan (FLEMP) [EN010142/APP/7.17(Rev04)]**.
- 1.3.13 Given the landscape mitigation committed to, the 250m buffer from residential receptors and that the height of BESS-Solar Station Compounds is only up to a maximum of 0.5m taller than the surrounding solar PV panels at maximum tilt, it is not considered likely that there would be a change in effects, if the locations of the BESS-Solar Station Compounds changed from

those shown on **Figure 3-1** of the ES **[AS-055]**, in accordance with the flexibility provided by the **Works Plan [REP2-004]**.

- 1.3.14 As such, there is no change to the assessment of impacts on any of the landscape and visual receptors reported within **Chapter 12: Landscape and Visual Amenity [EN010142/APP/6.1(Rev02)]** and it is considered that worst-case effects have been reported within the chapter.

Chapter 13: Noise and Vibration

- 1.3.15 The operational noise assessment presented within **Chapter 13: Noise and Vibration** of the ES **[AS-006]** has modelled the illustrative layout of the Scheme shown on **Figure 3-1** of the ES **[AS-055]**, which fits within the parameters summarised within **Table 1** of this document. As explained in paragraph 13.7.16 of **Chapter 13: Noise and Vibration** of the ES **[AS-006]** and in response to Q1.10.5 within the **Applicant's Response to Examining Authority's First Written Questions [REP3-062]**, if there is a decision in the future to move noise generating infrastructure closer to sensitive receptors than shown in **Figure 13-1: Noise Sensitive Receptors and Noise Monitoring Locations** of the ES **[APP-188]**, the Applicant commits that noise at sensitive receptors will be no higher than the levels presented in Section 13.8 of **Chapter 13: Noise and Vibration** of the ES **[AS-006]**. This commitment has been secured through Requirement 17 of the **draft DCO [EN010142/APP/3.1(Rev05)]**. This would in effect, restrict where the Applicant could move noise generating infrastructure like BESS. If modelling showed that levels would be higher than that presented in **Chapter 13** of the ES **[AS-006]**, the location would need to be adjusted, or the mitigation in place would need to be adjusted to ensure levels did not change.
- 1.3.16 As such, there is no change to the assessment of impacts on any of the noise sensitive receptors reported within **Chapter 13: Noise and Vibration** of the ES **[AS-006]** and it is considered that worst-case effects have been reported within the chapter.

Framework Battery Safety Management Plan

- 1.3.17 The **Framework Battery Safety Management Plan (FBSMP) [EN010142/APP/7.13(Rev01)]** has been updated at Deadline 4 to include the updates to BESS terminology and parameters. These updates do not result in any changes to the battery safety management principles nor compliance with the National Fire Chief's Council (NFCC) guidelines. It is noted that the Applicant is still awaiting the release of the update NFCC guidelines, and may propose further changes to the FBSMP once these are released. The updates have simply been made to ensure consistency with the terms used in the **draft DCO [EN010142/APP/3.1(Rev05)]**.